TEXTILE WORLD

A McGraw-Hill Publication — JUNE • 1946

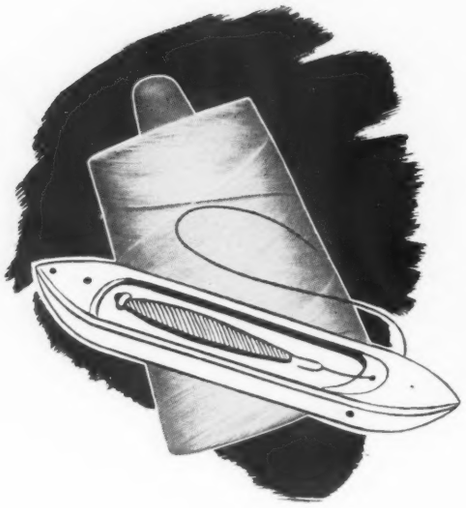
TECHNOLOGY DEPT.
PUBLIC LIBRARY
JUL 2 1946
DETROIT

TEXTILE-MILL KNOTS

A Step-by-Step Guide for Tying the Important Ones

PAGE 101

COTTON • RAYON • WOOL • SILK • NYLON



Plans and designs for all types of projects related to the textile industry. Appraisals, modernization studies, machinery layouts, air-conditioning, power and water filtration plants, and other phases of textile engineering.

ROBERT AND COMPANY
INCORPORATED
Architects and Engineers
ATLANTA

TWENTY-EIGHT YEARS' NATIONWIDE EXPERIENCE

IN INDUSTRIAL AND TEXTILE DEVELOPMENT

TEXTILE WORLD, Vol. 96, No. 6, June, 1946. Published monthly by McGraw-Hill Publishing Co., Inc. (Bragdon, Lord & Nagle Division). Publication Office, 99-129 North Broadway, Albany, N. Y. RETURN POSTAGE GUARANTEED. Editorial and Executive Offices, 330 West 42nd Street (18), N. Y. Allow at least ten days for change of address.
Subscriptions: United States and Possessions, $1.50 a year, $2.00 for two years, $3.00 for three years. Canada, $2.00 for one year, $4.00 for three years. Latin America countries, $5.00 for one year, $10.00 for three years. All other countries, $15.00 for one year, $30.00 for three years. Please indicate position and company connection on all subscription orders. Entered as second class matter August 25, 1936, at Post Office, Albany, N. Y., under the act of March 3, 1879. Printed in U.S.A. Twenty-five cents per copy.

Shuttle of the Year!

Runs 20,995 Hours

December 1942 to February 1946

The Oscar Goes Again

to

Utica & Mohawk Cotton Mills, Seneca, S. C.

Once More We have the Pleasure of Congratulating
Mr. Gary and Mr. O'Shields for
Such an Outstanding Job of Loomfixing

DRAPER CORPORATION

Hopedale, Massachusetts

YOU can improve the quality of your yarn—spin more of it faster—by lubricating spindles with *Texaco Spindura Oils*. Operators everywhere find that *Spindura* greatly increases efficiency because—

Texaco Spindura Oils provide extremely effective spindle lubrication. They resist oxidation, thickening, atomization—help eliminate spindle vibration, hunting and lagging, assure fewer ends down. They permit higher spindle speeds, more uniform tension and twist, firmer and heavier packages.

Texaco Spindura Oils are always uniform in quality and meet the lubrication requirements of all spindle manufacturers. For better results, use them in *your* mill.

For Texaco Products and Lubrication Engineering Service, call the nearest of the more than 2300 Texaco distributing plants in the 48 States, or write:

The Texas Company, 135 East 42nd Street, New York 17, N. Y.

TEXACO

TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

TUNE IN THE TEXACO STAR THEATRE EVERY SUNDAY NIGHT STARRING JAMES MELTON WITH HIS GUEST, ED WYNN—CBS

TABLE OF CONTENTS

Classified According to Reader Interest

← MILL DEPARTMENTS — FIBER → DIVISIONS

YARN PRODUCTION	WEAVING	KNITTING	FINISHING	ENGINEERING	MISCELLANEOUS	FEATURE ARTICLES	PAGE	COTTON	SYNTHETICS	WOOL	MISCELLANEOUS
Y	W	K	F	E	M	DON'T HIDE Your Light (Editorial)	4	C	S	W	M
Y	W	K	F	E	M	LET'S KNOT—and Let's Do It the Right Way	101	C	S	W	M
	W					TERRY EFFECT Is Easy to Produce	106	C	S	W	M
		K				Operating Hints on CIRCULAR KNIT Machine	108	C	S	W	M
Y	W	K	F	E	M	Grounding or Neutralizing Kills STATIC	110	C	S	W	M
			F			Process STABILIZERS Viscose Fabrics	114	C	S		
Y				E		Can CARD GRINDING be Standardized?	116	C	S	W	M
			F		M	SOLVENT VAPORS Can be Dangerous	118	C	S	W	M
Y	W	K			M	Coil Tester Gages YARN DIAMETERS	120	C	S	W	M
Y						Carding, Combing of STAPLE Eliminated	123		S		
Y	W	K	F	E	M	Cannon Offers Helping Hand to VETERANS	125	C	S	W	M
			F			Control of pH Aids SHRINKPROOFING	127			W	
	W					Can REDUCE SECONDS Due to Mispicks	129	C	S	W	M
Y		K				Proper HANDLING OF NYLON	131		S		
Y	W	K	F	E	M	STA Men Compare MAINTENANCE Methods	133	C	S		
Y		K	F			Recent Figures Confirm VAT-DYE GAINS	137	C	S	W	M
Y						Assigning DOFFER'S TASK by Table	139	C	S	W	M
Y	W	K	F	E	M	TEXTILE WAGES Up; Others Average Down	141	C	S	W	M
Y	W	K	F	E	M	COTTON EXPORT Plan Aims at Trade	143	C			
						KINKS AND SHORT-CUTS					
			F			Starting CLOTH ROLL with Adhesive	152	C	S		
Y						Hook on SCISSORS Keeps Yarn Cleaner	154		S		
	W					Holder Aids Sanding of SHUTTLES	154	C	S	W	M
	W					Device Eliminates CLOTH WRINKLES	154	C	S	W	M
Y						Doffers Use Sockets for WINDING RACKS	154	C	S	W	M
Y						Friction-Nut WRENCH Used by Winder	154	C	S	W	M
	W					Rods Aid in SLASHING RAYON	156		S		
				E		Gear-Blank Holder Speeds LATHE WORK	156	C	S	W	M
	W					Binder Release Plate Aids WEAVER	158	C	S	W	M
	W					LEASE-ROD Clamp Made from Picker Stick	158	C	S	W	M
			F			Dyeing Equipment Corroded by ACID DYE	158			W	
				E		Container for TOOLS from Bread Pan	158	C	S	W	M
						IN OTHER DEPARTMENTS					
		K				First Showing of Aveco TRICOT MACHINE	145		S		
	W	K				WEAVING-KNITTING Loom Makes Wide Range	146	C	S	W	M
				E		TOWMOTOR Features Side-Mounted Motor	146	C	S	W	M
		K			M	RUBBER THREAD Tester	146		S		M
			F			Continuous Process in Steam DYE RANGE	148	C	S	W	M
				E		Rotary File and Die GRINDER	148	C	S	W	M
				E		Light-Weight HAND TRUCK	148	C	S	W	M
	W					Rubber-Covered SQUEEZE ROLLS	150		S		
	W		F		M	Low-Concentrate Silicone for ANTIFOAM	150	C	S		
	W					Reeding Mixed WARPS	164			W	
Y				E		Grease Unsuited to Winder GAINER CASE	168	C	S	W	M
				E		Special Window PAINT Applied Once a Year	170	C	S	W	M
Y	W	K				FIBER TABLE Convenient and Useful	172		S		
Y	W	K	F	E	M	Check This List to REDUCE WASTE	174	C	S	W	M
			F			DESIZING Methods For Acetate Gray Goods	180		S		
Y						Good Cotton Needed for BLEND With Wool	182	C		W	
			F			Seek Stability in MOTHPROOFING Agent	184			W	
	W					Only Minor Changes to Set PICKING BALL	184	C	S	W	M
	W					Rolled SELVAGES Prevented by Reeding	186	C	S	W	M
Y						Two WOOLEN CARDS Supply 720 Spindles	188			W	

TEXTILE WORLD

JUNE 1946 — VOLUME 96 NUMBER 6

A McGRAW - HILL PUBLICATION

Edwin D. Fowle.....*Publisher*
C. W. Bendigo.....*Editor*
William B. Dall.....*Managing Editor*
Prentice M. Thomas.....*Associate Editor*
Earl Mauldin.....*Southern Editor* (Atlanta)
C. M. Bowden..*Southern Editor* (Charlotte)
H. S. Knowlton..*New Eng. Editor* (Boston)
C. Norris Rabold.....*Consulting Editor*
D. D. Hogate....*Chief, Washington Bureau*
Gladys Montgomery.....*Washington Editor*
Robert McK. Fink.....*Art Director*
Dexter Keezer.....*Economics Director*
William Buxman.....*Manager*

Published monthly. United States and Possessions, $1.50 a year, $2.00 for two years, $3.00 for three years. Canada, $2.00 for one year, $4.00 for three years. Latin American countries, $5.00 for one year, $10.00 for three years. All other countries, $15.00 for one year, $30.00 for three years. Single copy, 25c. Please indicate position and company connection on all subscription orders. Annual index in "Textile World Yearbook & Catalog.

McGRAW-HILL PUBLISHING CO., INC. Publication Office, 99 N. Broadway, Albany 1, N. Y. Editorial and Executive Offices, 330 W. 42nd Street, New York 18, N. Y.—JAMES H. McGRAW, *Founder and Honorary Chairman;* JAMES H. McGRAW, JR., *President;* CURTIS W. McGRAW, *Senior Vice-President and Treasurer;* HENRY G. LORD, *Vice-President;* JOSEPH A. GERARDI, *Secretary;* NELSON BOND, *Director of Advertising;* EUGENE DUFFIELD, *Editorial Assistant to the President;* J. E. BLACKBURN, JR., *Director of Circulation.*

District Offices—Atlanta 3, Ralph C. Maultsby, Dist. Mgr., 1011 Rhodes-Haverty Building; Boston 16, Ralph L. Chisholm, Dist. Mgr., 1427 Statler Building; Chicago 11, M. C. MacKenzie, Dist. Mgr., 520 North Michigan Ave., New York 18, Arch W. Fisher, Dist. Mgr., 330 West 42nd Street; Philadelphia 2, H. C. Harvey, Dist. Mgr., 16 South Broad Street; Washington 4, National Press Building; London WC 2, Aldwych House.

Of this issue 20,800 copies were printed

Member of Audit Bureau of Circulations
Member of Associated Business Papers, Inc.

Contents copyrighted, 1946, by McGraw-Hill Publishing Co., Inc. (All rights reserved)

DEPARTMENTS

Book Reviews.....162
Editorial.....4
Free for the Asking.....177
Kinks and Short-Cuts.....152
New Dyes and Chemicals.....150
Mill Maintenance.....150
News About Men.....248
News About Mills.....238
News About Suppliers.....230
News of the Month.....220
Pete and Bill.....161
Questions and Answers.....180
Round Table.....164
Textile Equipment News.....145

THE *Long-Range* VIEW

Don't Hide Your Light

Interchange of information during the war and the continuing seller's market, as well as other conditions, have led to a commendable attitude of cooperation within the textile industry.

Now that competition between mills is not so keen and now that many mills face common problems, such as the starch, coal, and yarn shortages, it is encouraging to see cooperation such as was shown when a group of mills was asked and agreed to supply the customers of a neighboring mill that was forced to shut down, until such time as that mill could resume operations.

It is also encouraging to see the number of top-notch mills which allow their key men to participate in the interchange of technical information, to visit other mills, and to be visited. Many mills are learning the truth of the old saying that a closed door shuts out more than it shuts in.

The operators of those mills seem to realize that anyone who picks up ideas from them can, at most, hope to be only second best. While the copyist is imitating, the progressive mills are ever continuing to improve. Practically all mills doing similar work have the same ideas, the better mills merely carry out the ideas better—they are willing to put out that additional bit of effort which so often is the difference between a good mill and a mediocre one. It is rare that some trick unknown elsewhere can be credited for a mill's superiority.

It has often been observed that some mill operators who keep to themselves do so because of a sense of inferiority, often unconscious. In one instance, the top executives of a large mill felt unqualified technically to talk to other mill operators, and so refused to have anything to do with their contemporaries, rather than to risk the danger of exposing their ignorance. Another mill management which consistently refused to permit any outsiders within its doors was probably justified in its attitude—what visitors would see would do the mill's reputation no good.

On the other side of the picture, there are mills such as the Avondale group which for years has had an annual inspection for its own executives and other personnel, in addition to its friends. The group has much to show, much that it can point to with pride. The recognition which the inspection gives to the achievements of Avondale's personnel is no mean incentive for all of its employees to show what they can do. (In these days when remuneration is not too effective a stimulant, mills might well look to what can be achieved by recognizing everyone's innate pride of accomplishment.)

Of course, there are limits to the extent to which any mill can afford to open its doors. Some things, such as items in research and development stages, must be protected—but even many of these can progress as the result of discussion and interchange of ideas. Recently a visitor was able to give a research man the key to a knotty problem, a key that the research man might never have found within his own organization.

It is surprising how many times one idea generates another. We of TEXTILE WORLD see examples of this phenomenon as each new issue is published. We come to expect that part of the benefit of a technical publication is in the ideas it stimulates, in addition to the material which is of direct application.

A light hid under a bushel neither enlightens nor stimulates anyone. Are you hiding yours?

C. H. Bendigo

ALL MACHINES AT TOP SPEED!...

EFFICIENT DRIVES WILL DO THIS

The secret of drive efficiency is correct tension, plus strong, tough, resilient, durable Tannate leather belting.

A Rhoads Tannate-Rockwood Short Center Drive automatically adjusts belt tension to varying loads. The weight of the motor on the pivoted Rockwood base takes care of load fluctuations.

The physical properties of Tannate impart unusual endurance, long life with minimum maintenance.

This is *the* drive for you to use. Consult Rhoads Engineering service—get more details.

Established 1702

J. E. RHOADS & SONS

35 N. SIXTH ST., PHILA. 6, PA.

NEW YORK CHICAGO ATLANTA

RHOADS *Tannate* WATERSHED LEATHER BELTING

Tannate-Rockwood SHORT CENTER DRIVE

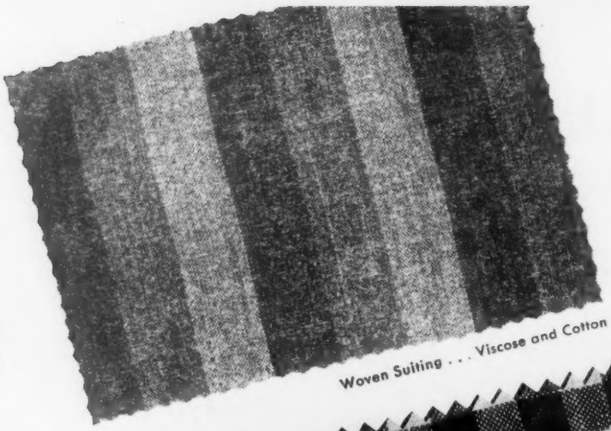
THE NECESSARY

Experience

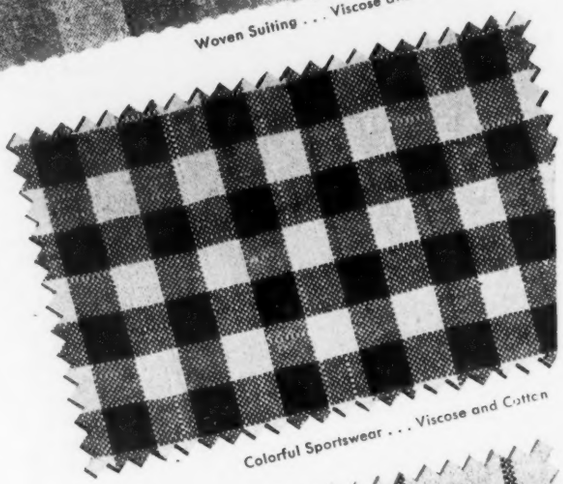
TO MAKE YARNS

FOR FABRICS LIKE THESE

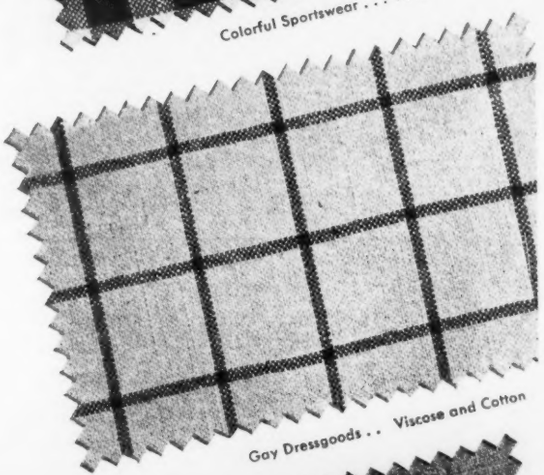
IS YOURS WITHOUT EXPERIMENTING



Woven Suiting . . . Viscose and Cotton



Colorful Sportswear . . . Viscose and Cotton



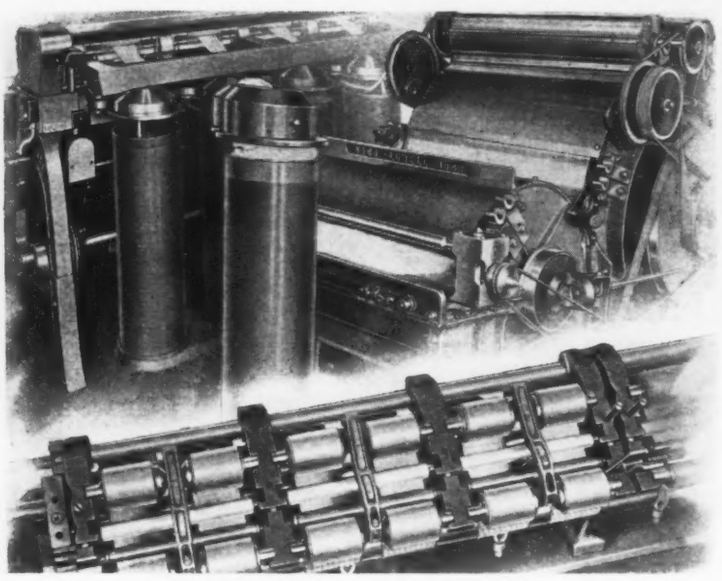
Gay Dressgoods . . Viscose and Cotton

Butcher Linen . . . Viscose and Cotton

The growing interest and increasing acceptance for yarns and fabrics made from synthetic fibres need not present any difficulties to the mill considering this new production for the first time. Most of the basic knowledge and experience necessary to blend, prepare, and spin any of these types of fibres in simple or complex combinations is available to you without any experimenting on your part.

In the research and experimental laboratories at Saco-Lowell the fundamentals of this work have been done for you. Our engineers are ready to offer you the help you may need in planning and developing the proper organization for the efficient processing of these new fibres.

SACO-LOWELL *flexible equipment** **FOR SYNTHETICS**



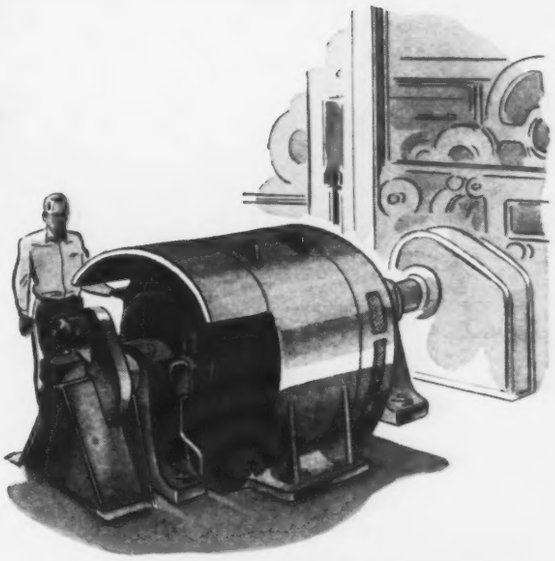
* A few simple changes will convert this equipment to cotton processing.

SACO-LOWELL SHOPS

BOSTON, MASSACHUSETTS

Charlotte • Greenville • Atlanta

"What! Stop a 30" Calender Roll in Less than 14" of Roll Travel!"

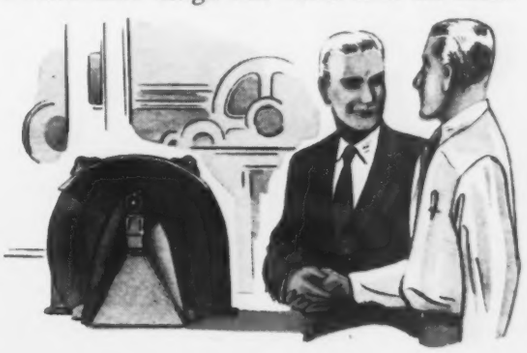


"Right! And besides that emergency stop, give us 10 to 1 speed range on the motor and hold speed *close*. The torque characteristic of our calender requires that the motor have high overload capacity at low speeds without overheating. And because of operating conditions, we want sparkless commutation too!"

B-b-u-t-t... "No buts" said Mr. Rubber Mill Man, "that's *exactly* what we need. You see, we're experimenting with new materials on our rolls, and since we can't *pre*-determine best roll speeds for them, we must have a drive that'll give us complete *range* of speeds, and at the same time, complete *protection* for our workers".

"In A Nutshell, you and the control engineers must design a calender drive system that'll give us *higher* and *lower* calender speeds, *closer* speed regulation and *sudden* emergency stopping — *all three!*" Well, we set up meetings between the control and motor designers to plan a *coordinated* design that would meet the needs.

An Automatic Speed Control incorporating both our m-g set and "Regulex" exciter was designed to hold selected speed within close limits. And, after a careful analysis of required load characteristics, we designed a 400 hp d-c motor of low inertia for quick stopping . . . and which also provided speed range from 25 to 250 rpm.



Remember That 14" Stop? After the system went in, we stopped the rolls first at 18" . . . easy. Then at 14" . . . at 12" . . . at 9"! And we probably would have stopped 'em even shorter but for possible danger of too sudden stops to the calender gear system. And commutation? After 6 months, the operators say it's perfect. A 2048

Moral: Every time Allis-Chalmers discovers new ways of solving *special* motor problems, like this one, it also learns how to build better *standard* motors for you! Watch for these new and better motors from A-C. ALLIS-CHALMERS, MILWAUKEE 1, WISCONSIN.

Wait 'til you see the NEW

ALLIS-CHALMERS MOTORS!

WHAT USERS SAY ABOUT AMCO

SUPERINTENDENT OF LARGE COTTON MILL EXPECTS 10% INCREASE IN WEAVE-ROOM EFFICIENCY FROM NEW HUMIDIFYING SYSTEM

"We have just contracted for a humidifying system for the weave room. This system will guarantee us a relative humidity of 80% with a 10% variation in temperature.

"At present, we have nothing to make working conditions in this room more pleasant, and the heat in this room is unbearable. We are certain that by installing this new humidifying system we may expect a better morale to result. From this better working condition we expect to get a 10% rise in efficiency.

"We considered installing air conditioning in the weave room instead of this humidifying system. But this air conditioning involved (1) too much money, (2) considerable duct work overhead, and (3) the problem of dust and lint eventually getting into the screens, which would necessitate frequent cleanings.

"Whereas with the humidifying system, we don't have any ducts. We are putting in 19 ventilating fans; each one is automatically controlled."

HUMIDIFYING EQUIPMENT PAYS FOR ITSELF MANY TIMES OVER IN THIS WORSTED MILL

"We were not aware of short selling ourselves on top until we discovered by accident a couple of years ago that our combed wool was far under regulation of standard moisture content," says the vice president. "Ours was running dry. We installed humidifying equipment, and now our average moisture content is 11%. This equipment has paid for itself many times."

★

THESE two clippings refer to the results of Amco Humidification Systems such as that shown below whereby a prominent worsted manufacturer reaped the benefits of Amco humidification *in every major department of his mill!*

An Amco System automatically holds humidity right on the mark . . . cuts breakage of warp and filling . . . reduces imperfect goods . . . keeps production at peak capacity. Self-cleaning Amco Atomizers deliver finely atomized spray without drip or feathering down – the self-cleaning feature in both air and water nozzles reduces maintenance to a minimum.

Right now – find out how Amco can speed up production and cut costs. Let an Amco engineer survey your plant and submit recommendations for the exact system to meet the particular conditions and needs of your mill.

EVERY DEPARTMENT OF THIS WORSTED MILL IS BENEFITING FROM AMCO HUMIDIFICATION

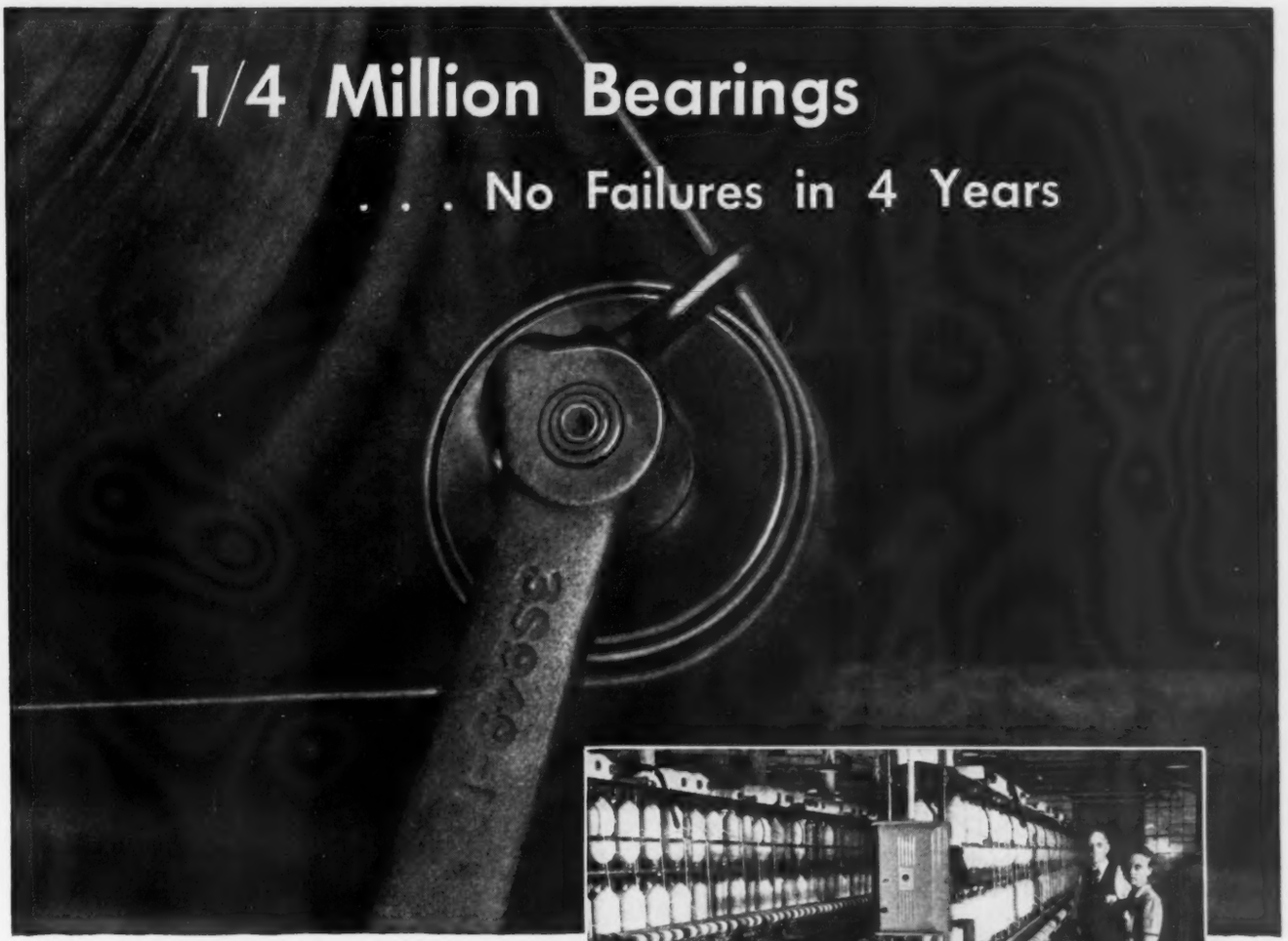
CARDING | COMBING | DRAWING | SPINNING

AMCO HUMIDIFICATION

AMERICAN MOISTENING COMPANY, Providence 1, R. I. • Atlanta • Boston • Charlotte

1/4 Million Bearings

. . . No Failures in 4 Years



Above: Note streamlined design of tension pulley mounting. No projecting parts to catch lint. Friction-less operation saves power, greatly increases tape life.

Right: Installation in Saco-Lowell spinning frame in plant of International Braid Company.

Night and day for more than 4 years 250,000 of these New Departure horizontal tension pulley bearings have performed in various textile plants without a single failure reported.

This new type ball bearing developed by New Departure has many unique features which account for this fine record.

Built into each ball bearing is a reservoir which filters and meters the oil entering the bearing.

Lubrication (required at extremely infrequent intervals) is done quickly and easily by hypodermic needle fitted to oil can or pressure oiler.

May we help you get this type of bearing service? Detailed literature and engineering recommendations on request.

3427

NEW DEPARTURE

BALL BEARINGS

NEW DEPARTURE • DIVISION OF GENERAL MOTORS CORPORATION • BRISTOL, CONNECTICUT

Sales Branches: DETROIT, 7-122 G. M. Bldg., *Trinity 2-4700* • CHICAGO, 332 S. Michigan Ave., *Wabash 5875* • LOS ANGELES, 5035 Gifford Ave., *Kimball 7161*

"...with Resloom....., felting and consequent high shrinkage normally experienced with wool will not take place"*

Laundry Age, January, 1946

Mr. Arthur I. Anderson, who conducted Resloom tests, examines a wool shirt after laundering. Mr. Anderson heads the New England Testing Laboratory, Somerville, Mass.; was formerly head of the American Institute of Laundering's Department of Washroom Research and Textiles.

This statement by Arthur I. Anderson in "Laundry Age" confirms again what Monsanto textile chemists have been saying about that extraordinary melamine finish, Resloom: TRULY LAUNDERABLE WOOLENS ARE NOW POSSIBLE.

What this means to laundries is, of course, only a fraction of what it means in satisfaction and service to consumers, *and what it means, particularly, to the wool industry in new opportunities.*

Experience in mill, in finishing plant, in laundry and in actual service, shows that Resloom can give definitely ascertainable, definitely marketable values: (1) shrinkage control, (2) stability, and (3) quality, to practically all woolens and worsteds...in suitings, shirtings, blankets, wool hose, accessories, etc.

How Does Resloom Do It?

The "secret" of Resloom's success in this long-sought-for achievement is simple. When fibers of woven fabrics are passed through a water bath containing a small concentration of Resloom, the water opens up the tiny interstices of the individual fibers, permitting the injection of the resin-forming chemicals into the heart of the fiber. In the subsequent curing, at around 300° F., the resin is formed *inside* the fibers, giving the textile its stability without making it boardy in hand. No amount of water, washing or dry cleaning will separate resin from fiber once the Resloom is cured.

For complete technical data, Resloom samples, or arrangements for a demonstration in your operations, address: MONSANTO CHEMICAL COMPANY, Everett Station, Boston 49, Mass.

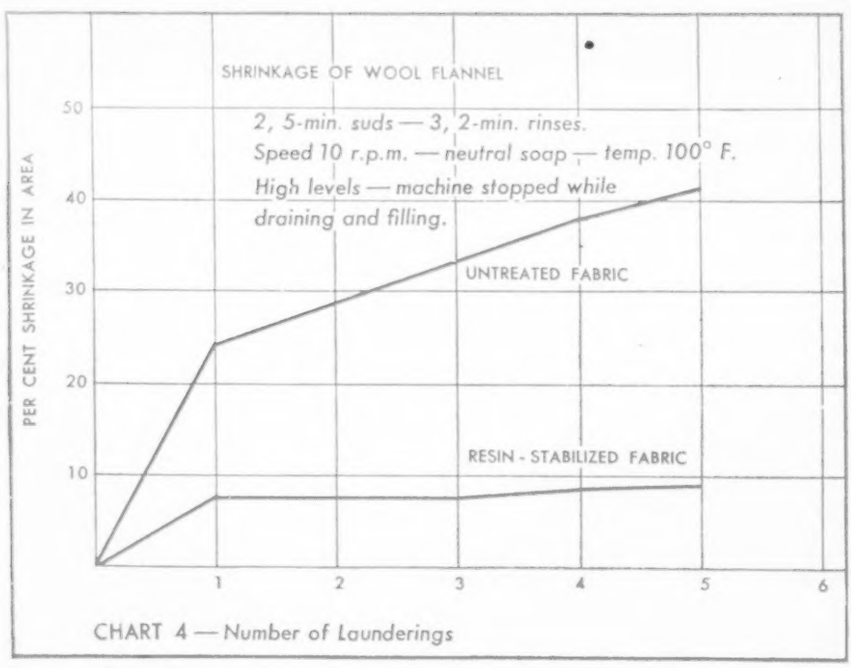


CHART 4 — Number of Launderings

* Full text of quotation:

"Numerous laundering tests conducted with wool fabrics resin-stabilized with Resloom reveal that even at high machine speeds and/or in high-temperature washing, felting and consequent high shrinkage normally experienced with wool will not take place. In fact, such fabrics when commercially available could be washed without use of numerous precautions now necessary. In addition to special equipment that would not be needed, it is apparent that more wool apparel would fall into the classification of 'launderable'."

Resloom: Reg. U. S. Pat. Off.

MONSANTO
CHEMICALS AND PLASTICS

The Textile
SERVING INDUSTRY...WHICH SERVES MANKIND

BALANCED CONSTRUCTION

Makes TEXROPE V-BELTS Run Cooler... Smoother...Longer

Look at this cross-section of a TEXROPE Super-7 V-Belt. This balance between rubber, cord and fabric — the weight of cover — position of load carrying cords — thickness of cushion — width and depth of belt — have been carefully engineered. They've been proved on the machines of American industry through 20 years of successful operation.

This long experience has developed other advantages, too: *50% Stronger Cords,* of long staple hard-twisted cotton — *Tough Duplex Cover* to take the wear, seal out dirt and grit — *Thick Cushion* of cool-running improved Buna-S to protect the cord structure from shock.

YOUR V-BELT DRIVE HEADQUARTERS

Call your Allis-Chalmers office or dealer for TEXROPE Super-7 V-Belts — for full range of standard, "Magic-Grip" and Vari-Pitch sheaves — for Speed Changers and complete V-Belt Drive engineering help. ALLIS-CHALMERS, MILWAUKEE 1, WISCONSIN.

A 2034

HEAR THE BOSTON "POPS":
Every Saturday Evening, American Broadcasting Co.

WHICH TEXROPE Super-7 DO YOU NEED?

Pick the right TEXROPE Super-7 V-Belt — it'll give you the most in efficient power transmission and economy.

TEXROPE Super-7 V-Belts result from the cooperative research of two great companies — Allis-Chalmers and B. F. Goodrich — and are sold exclusively by A-C.

Heat-Resisting Super-7
Stands temperatures up to 180°. The TEXROPE V-Belt for most drives.

Oil-Resisting Super-7
Neoprene cover protects core against moderately oily or greasy conditions.

Oil-Proof Super-7
Made of Neoprene throughout. Use it when the belt must swim in oil.

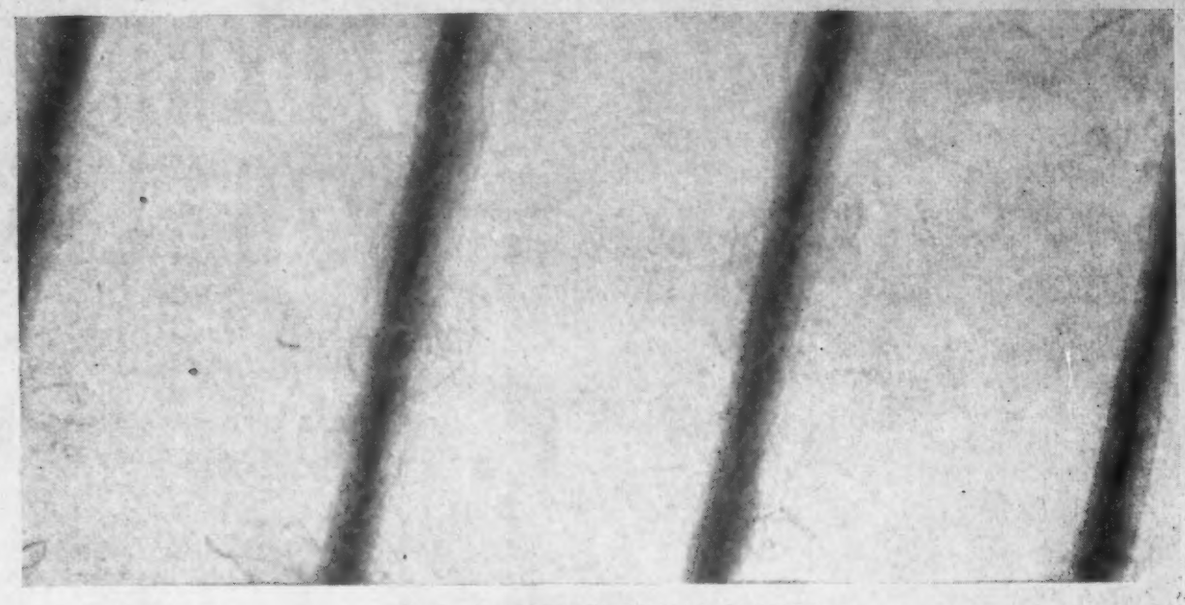
Static-Resisting Super-7
Recommended where explosion hazard exists. Static-conducting element throughout cover won't wear off.

Super-7 Steel
Twin steel cables, to pull extremely heavy loads with minimum stretch.

GET THEM — through your Allis-Chalmers district office or dealer.

ALLIS CHALMERS TEXROPE V-BELT DRIVES

J & B *Modernized* MULE



J & B MULE SPUN YARN

(Magnified 4 times)

Note it has the loftiness of a true woolen yarn

IT PRODUCES A TRUE WOOLEN YARN

MULE SPINNING is more like hand spinning than any other mechanical process in use today. That is, the twisting is done in a straight line BEFORE the winding process, not during the winding process, and there are no travelers to flatten out the yarn or otherwise destroy its loftiness.

But part of the twisting IS done during the DRAFTING PROCESS; the twist enters the thinner places in the roving first, permitting less draft at these points and more draft in the thicker areas. As the size of the roving becomes uniform the amount of twist also becomes uniform throughout the length of the thread.

Partly because of these mechanical principles and partly because of the patented J & B Self Aligning Spindle, the J & B Mule produces a true woolen yarn, — superior in strength, elasticity, loftiness, roundness and uniformity of size and twist to that produced by frame spinning.

Catalog on request

SPINDLE ASSEMBLY

Unit support of lower bearing allows spindle to adjust itself to eccentric loads and prevents vibration. Elimination of step rail permits permanent alignment of bearings and prevents sticking. Ball bearing at the bottom and Durex bearing at the collar board permit high speeds and minimum speed variation between spindles.

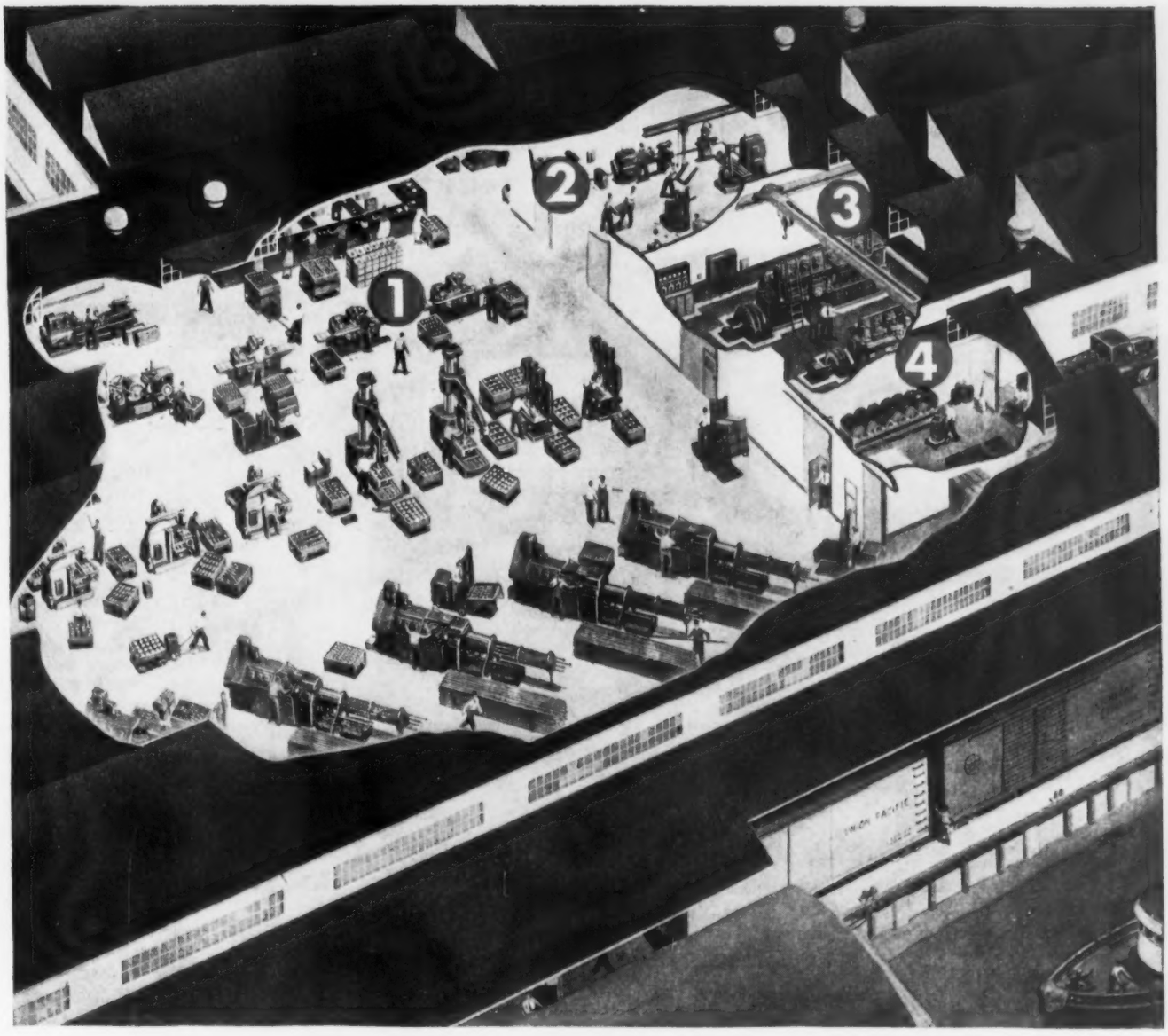
JOHNSON & BASSETT, INC.

(ESTABLISHED 1870)

WORCESTER, MASSACHUSETTS, U. S. A.

EXPORT AGENTS:

George R. Coleman Co., 50 Church St., New York 7, N. Y., U.S.A.



Find these hidden Profits... inside your plant!

1 MORE CONTINUOUS PRODUCTION

Vital factor in any production picture is steady, uninterrupted machine operation. Socony-Vacuum Correct Lubrication assures peak machine efficiency and greater overall production.

2 LOWER MAINTENANCE COSTS

Correct oils and greases prolong machine life, reduce production losses due to "downtime", minimize repair bills. This means important savings, increased profits.

3 REDUCE POWER CONSUMPTION

By reducing friction losses, Socony-Vacuum lubricants cut power waste. In the power plant, correct oils keep turbines, Diesels, steam engines and air compressors operating at peak efficiency.

4 LOWER LUBRICATION COSTS

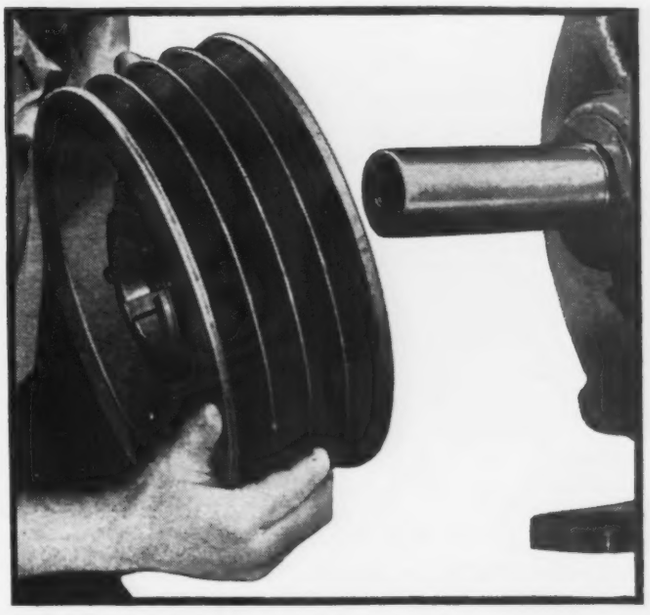
Quality lubricants stand up longer, give maximum protection with minimum consumption. Ultimate lubrication costs are lower. Get these profits for your plant.

GARGOYLE Lubricants

Socony-Vacuum Oil Company, Inc.

and Affiliates: Magnolia Petroleum Company, General Petroleum Corporation

"MAGIC-GRIP" SHEAVE



GOES ON EASY

There's plenty of clearance in the bushing of the patented "Magic-Grip" sheave. It slips easily on even oversize shafts . . . never requires filing, reaming or hammering. Think of the time and money *that* can save!

Sheave and bushing come completely assembled . . . one precision-made unit ready to mount. Slide it on the shaft to exact alignment. Then — tighten three cap screws with the handy wrench furnished. That's all! Any one can do the job—quickly, easily, accurately.

— GRIPS TIGHT

The sheave is locked on the shaft with the powerful grip of a vise. No slip, no backlash or wobble. Yet it can be removed as easily as it goes on.

"Magic-Grip" sheaves save time and money the first time they are installed . . . are indispensable for applications requiring frequent sheave changes. Yet they cost no more than standard sheaves of comparable heavy-duty construction.

YOUR V-BELT DRIVE HEADQUARTERS

Call your nearest Allis-Chalmers office or dealer for TEXROPE "Magic-Grip" sheaves, Texsteel, Texdrive and Vari-Pitch sheaves, Speed Changers and famous TEXROPE Super-7 V-Belts. Full range of types and sizes. ALLIS-CHALMERS, MILWAUKEE 1, WISCONSIN.

A 2035

ALLIS CHALMERS TEXROPE V-BELT DRIVES

HEAR THE BOSTON "POPS": *Every Saturday Evening, American Broadcasting Co.*

Junction CONDULETS

for pulling and connecting electrical conductors — all sizes

The illustrations show a representative selection from the hundreds of different junction Condulets that are listed in Crouse-Hinds Condulet Catalog 2500. Many other housings in all sizes can be furnished with blank covers for use as junction Condulets.

(CONDULETS are made only by CROUSE-HINDS)

No. 9
of a series of advertisements which demonstrate that CROUSE-HINDS "complete line" means much more than just a range of sizes—there is a wide variety of highly specialized types in each classification.

Obround, Type X with Wedge-Nut Cover

Type GSC

Type LBD

Type GRF without Lugs

Form 8, Type T

Type GRF with Lugs

Mogul, Type BC

Type PNX

Type PKC

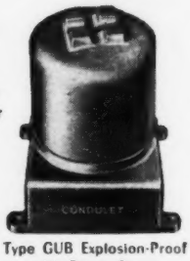
Type GUAC Explosion-Proof

Type GUFX Explosion-Proof

Type ESC Explosion-Proof

Type GUJL Explosion-Proof

Type EJH Explosion-Proof with 2½-inch Dome Cover


Type GUB Explosion-Proof with Dome Cover

Type GUEL Explosion-Proof

Type SEHT

Type GRT with Wedge-Nut Cover

Type AEQ

Type GUAT Explosion-Proof with Lugs

Type GUBCT Explosion-Proof

Type EJB886 Explosion-Proof

Type FSL

Type SEX

Type GRC with Connection Block and Screw Cover Broken-away View

Type YC

Type FDC

Type SKC

Type GUP Explosion-Proof

Type LBH Explosion-Proof

Type FSD Two-Gang

Type GRN

Type GUAP Explosion-Proof

Type CPS "T" Explosion-Proof with Blank Cover

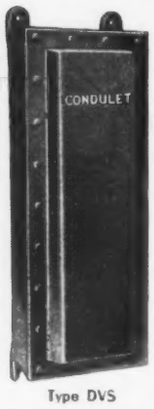
Type EJB4164 Explosion-Proof

Type PRT

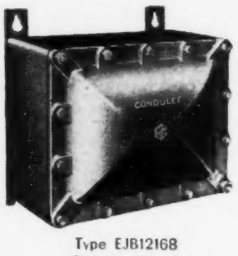
Type FDB Three-Gang

Type JUB

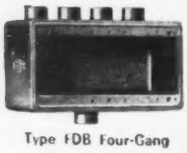
Type YSW

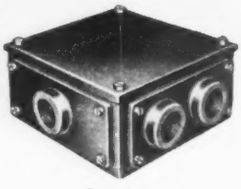

Type DVS

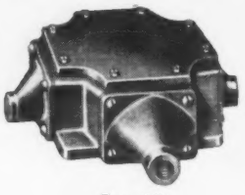
Type CPS Dead End Explosion-Proof with Hub Cover


Type EJB12168 Explosion-Proof

Type AD


Type FDB Four-Gang


Type RS


Type AJX
Takes a variety of interchangeable hub plates

Type EPH Pothead Explosion-Proof

Type PJX

A Nationwide Distribution Through Electrical Wholesalers

CROUSE-HINDS COMPANY
Syracuse 1, N. Y., U. S. A.

Offices: Birmingham — Boston — Buffalo — Chicago — Cincinnati — Cleveland — Dallas — Denver — Detroit — Houston — Kansas City — Los Angeles — Milwaukee — Minneapolis — New York Philadelphia — Pittsburgh — San Francisco — Seattle — St. Louis — Washington. *Resident Sales Engineers:* Albany — Atlanta — Charlotte — Indianapolis — New Orleans
CROUSE-HINDS COMPANY OF CANADA, LTD., *Main Office and Plant:* TORONTO, ONT.

CONDULETS · TRAFFIC SIGNALS · AIRPORT LIGHTING · FLOODLIGHTS

Smooth and Durable

PICKER STICKS, LOOM-BOX LININGS, TENTER FRAME CLIP OPENERS OF FORMICA!

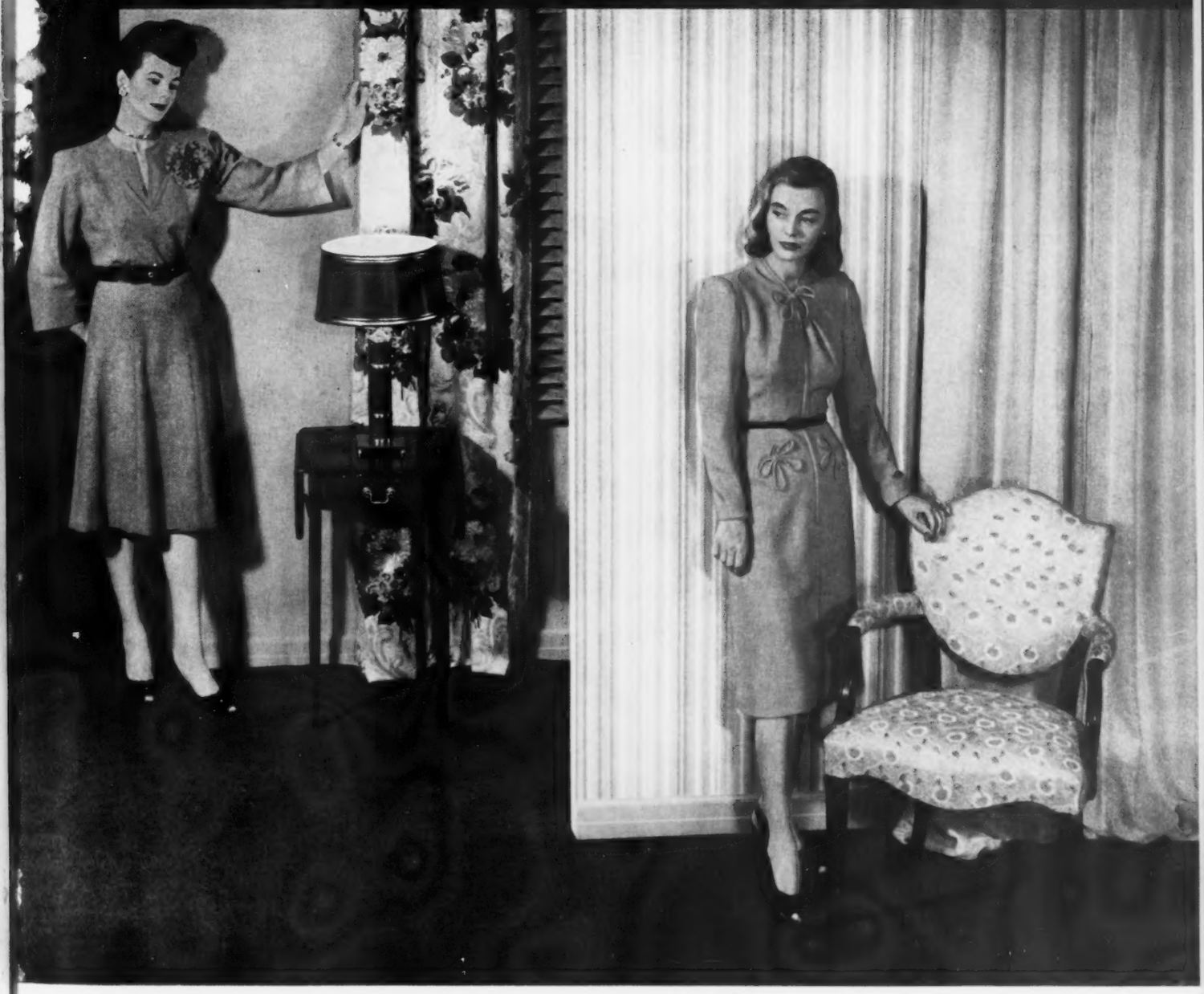
THE combination of light weight, smooth texture (that never wears rough) and great durability which Formica offers the maker of textile machinery has greatly improved the performance, and reduced repairs and time-out-of-service of many important textile machines.

In all of the many places where Formica has been used in textile machinery it will outwear wood and metals. It never shatters or wears rough so that threads or fabrics are snagged. Grades and types of Formica required for textile uses are now in good supply and normal peacetime service is available on them.

FORMICA

THE FORMICA INSULATION COMPANY, 4061 SPRING GROVE AVENUE, CINCINNATI 32, OHIO

SANDOZ PRESENTS *the color achievement of the month*



Color Control WITH ALEXANDER SMITH

Ensemble effect . . . with each color in the room just as *right* for the others —in harmony or contrast—as if a single designer had worked out the carpet, draperies, furniture, wallpapers and paint . . . is now assured with B. H. F. (Basic Home Furnishings) colors, sponsored, in its current advertising, by Alexander Smith & Sons Carpet Co.

To be sure that the colors in its carpets are absolutely faithful to the nine B. H. F. colors, Alexander Smith includes Sandoz among its suppliers.

And so hundreds of other firms—in home furnishings, in apparel—depend on Sandoz' policy of *thinking ahead with textiles* to help them obey, strictly, the dictates of designers and decorators who say that such-and-such colors are proper and (in effect) obligatory.

Sandoz meets the dye requirements of the rug industry with a full range of level dyeing acid colors.

For acid, chrome or direct dyes . . . or auxiliary chemicals . . . for both natural and synthetic fibres . . . be guided by the successful "color achievements" you have been seeing in these Sandoz advertisements.

Sandoz application laboratories are located in New York, Boston, Charlotte, Philadelphia, Los Angeles, Toronto, where stocks in wide range are carried. Other branches in Chicago, Paterson and Providence.

SANDOZ CHEMICAL WORKS, INC., 61 VAN DAM STREET, NEW YORK 13, N. Y.

SANDOZ *thinks ahead with textiles*

S SANDOZ

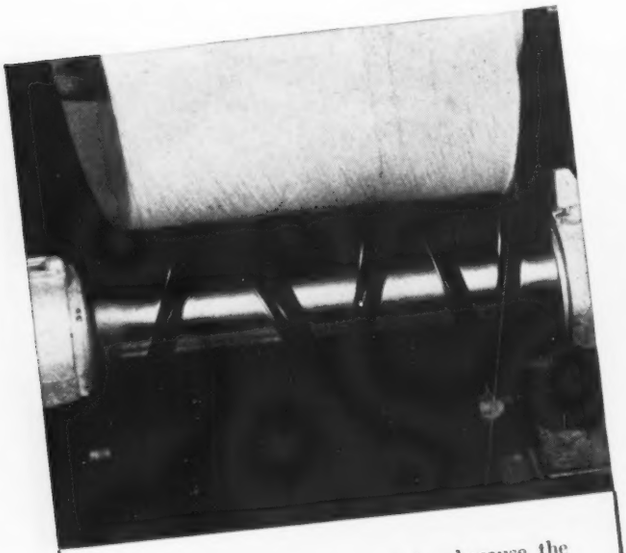
CONES that simplify knitting... from a MACHINE that simplifies winding

Knitting mills prefer Roto-Cones because they eliminate press-offs that result from stitches, roll cuts, and yarn sloughing-off. Spinning mills like Roto-Coners* because they are easy to operate and easy to maintain.

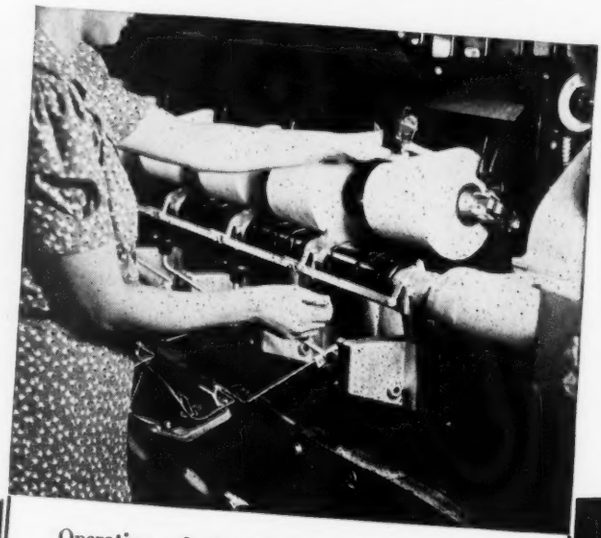
To give your customers paper cones of yarn that will satisfy them in every respect ... to put your winding room on the most economical basis . . . consider the Roto-Coner* — the high-speed winding machine with the exclusive Rotary Traverse. Write for Bulletin 144, addressing Universal Winding Company, Providence, Boston, Philadelphia, Utica, Charlotte, Atlanta.

*Reg. U. S. Pat. Off.

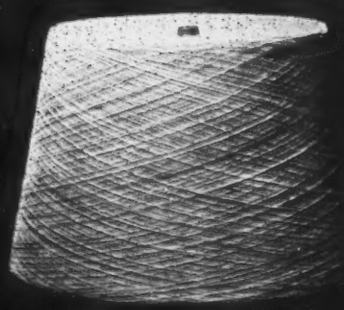
23-5-16



Roto-Cones are free from stitches because the groove in the Rotary Traverse reverses the yarn quickly at the ends of the traverse . . . are free from cut yarn because the Rotary Traverse is a smooth, one-piece combination driving drum and yarn guide . . . will not slough off because the steep-angled lay of yarn (the same for all yarn counts) insures free delivery at all package diameters.



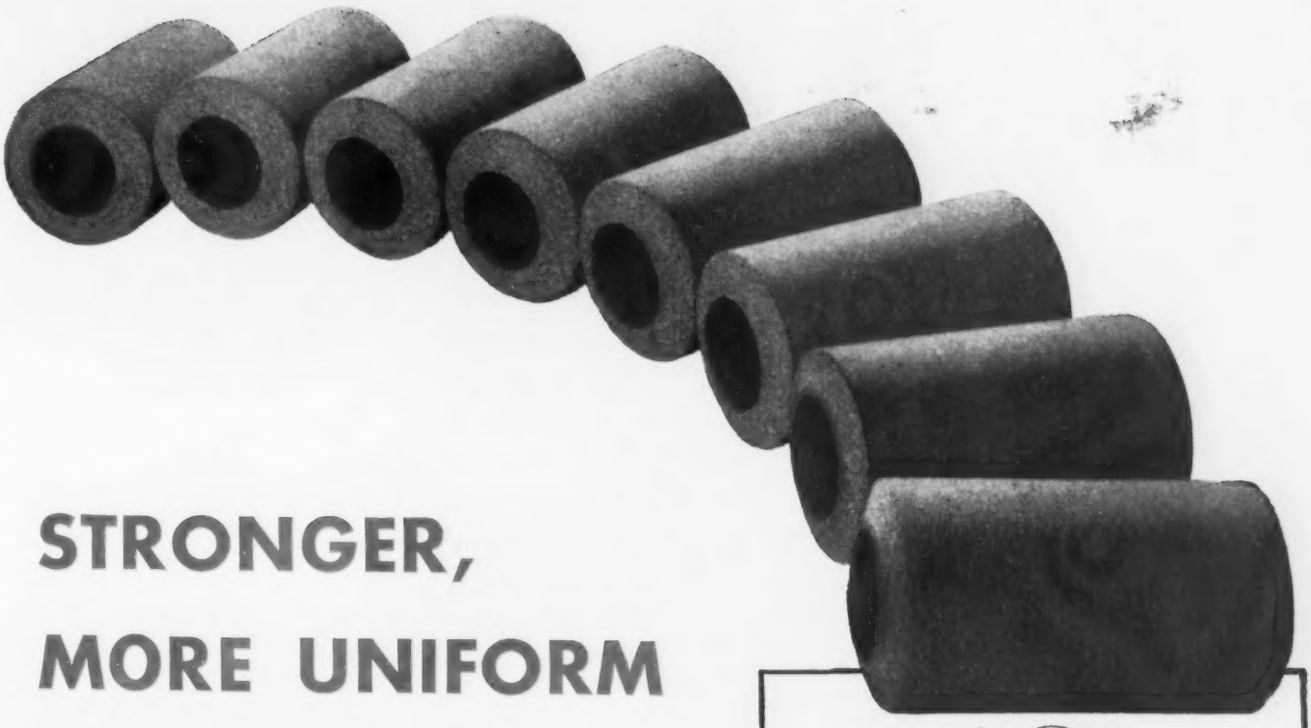
Operation of the Roto-Coner* is extremely simple. The machine is quiet, controls are conveniently located, adjustments are few. The Rotary Traverse is standard for all yarn sizes, and no reduction in speed is needed when changing to coarser counts. There are no cams or fast-wearing reciprocating parts to be lubricated. Maintenance is held to a minimum, running to about ⅓ of 1% of investment cost per year.



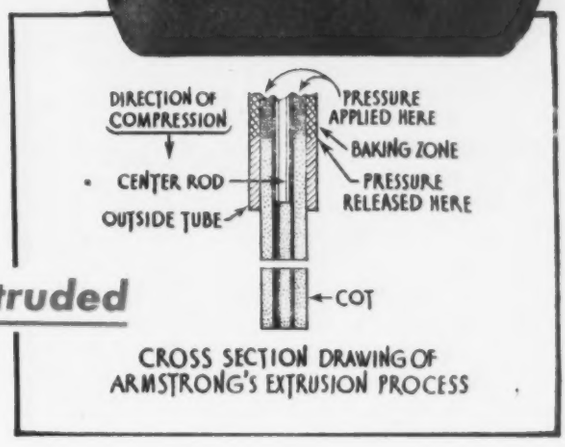
ROTO-CONER* LEESONA REG. U.S. PAT OFF.

Open-Wind Cones for Knitting

WARPING CONES • DYEING PACKAGES • PARALLEL TUBES FOR TWISTING



STRONGER, MORE UNIFORM YARN



CROSS SECTION DRAWING OF ARMSTRONG'S EXTRUSION PROCESS

. . . because this cork cot is *extruded*

Developed in Armstrong's Laboratories, the exclusive extrusion process shown above produces seamless cork cots. These seamless cots are uniform in density from inside to outside, from end to end . . . and from cot to cot! Consequently, they compress evenly, maintain a true drafting surface, spin stronger, more uniform yarn.

This seamless construction, plus their consistently high friction, accounts for the year-in, year-out superior performance of these cork cots. Their extra "grip" gives you better drafting, reduced end breakage, less slippage. Waste is carried well back onto the clearer boards, so that no eyebrowing occurs. And because these cots are extraordinarily resilient, they "come back" quickly after passing top roll laps or hard ends.

In addition, Armstrong's Cork Cots are low in first cost. They have a long initial service life. And they can be rebuffed, made like new, three or four times . . . for a total of four to five full length service lives. Each rebuffing costs as little as one-half cent per roll.

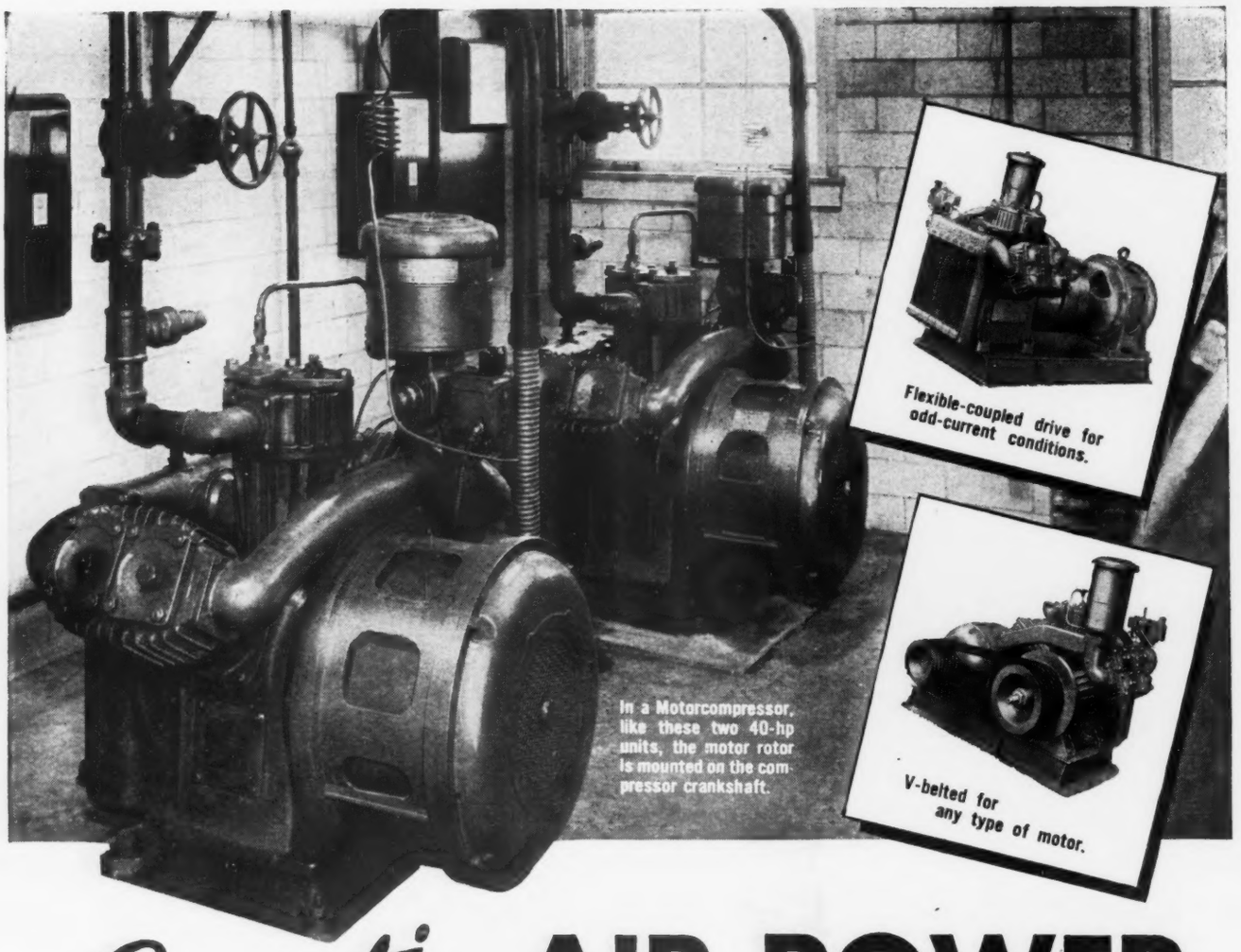
These advantages explain why Armstrong's Cork Cots are now serving more spindles than any other roll covering. Test them on your own frames now. Ask your Armstrong representative for samples, prices, and complete information. Or write today to Armstrong Cork Company, Textile Products Dept., 8306 Arch Street, Lancaster, Pennsylvania.

BETTER RUNNING WORK

— MORE POUNDAGE

ARMSTRONG'S CORK COTS

ACCOTEX COTS • ACCOTEX APRONS


Flexible-coupled drive for odd-current conditions.
In a Motorcompressor, like these two 40-hp units, the motor rotor is mounted on the compressor crankshaft.
V-belted for any type of motor.

Generating AIR POWER
WITH AIR-COOLED COMPRESSORS

TYPE 40

MOTORCOMPRESSORS

- 7 Sizes from 15 to 90 hp
- Two-Stage Compression
- Completely Air-Cooled
- Efficient Channel Valves
- Compact and Light Weight
- No Special Foundation Needed
- Timken Roller Main Bearings
- Constant-Level Lubrication
- Dual Control for Efficient Regulation under any kind of load.
- Built-in Motor, V-Belt, or Flexible-Coupled Drive.

For sizes 1/2 to 15 hp, use Ingersoll-Rand Type 30 Air-Cooled Compressors

By using Two-Stage Air-Cooled *Motorcompressors* to generate your Air Power, you eliminate the cost of water, water piping, and the danger of freezing.

These compact, light-weight, and well-balanced compressors require practically no foundation. They are installed, and serviced, easily and quickly.

Where such factors are primary considerations, *Motorcompressors* are ideal for the main air supply... or for supplementing the capacity of your larger compressors during peak loads... or for locations remote from the main compressed-air and water lines. And their efficient two-stage design will save power.

To increase the output of your plant, or to cut over-all production costs, you may need *more* Air-Power. An Ingersoll-Rand engineer can help you select air equipment best suited to *your own requirements*... compressors that generate *lowest-cost* Air Power, and the tools that get the most work out of the Air.

Ingersoll-Rand

11 BROADWAY, NEW YORK 4, N. Y. 1-771

COMPRESSORS · AIR TOOLS · ROCK DRILLS · TURBO BLOWERS · CONDENSERS · CENTRIFUGAL PUMPS · OIL AND GAS ENGINES

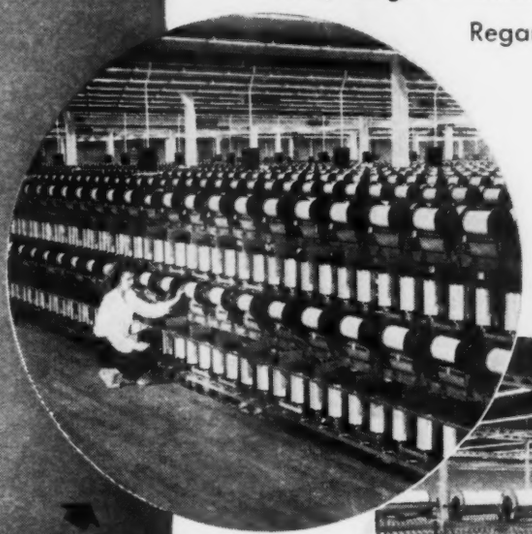
For Every Twist.. a WHITIN TWISTER

from finest thread to coarsest yarns

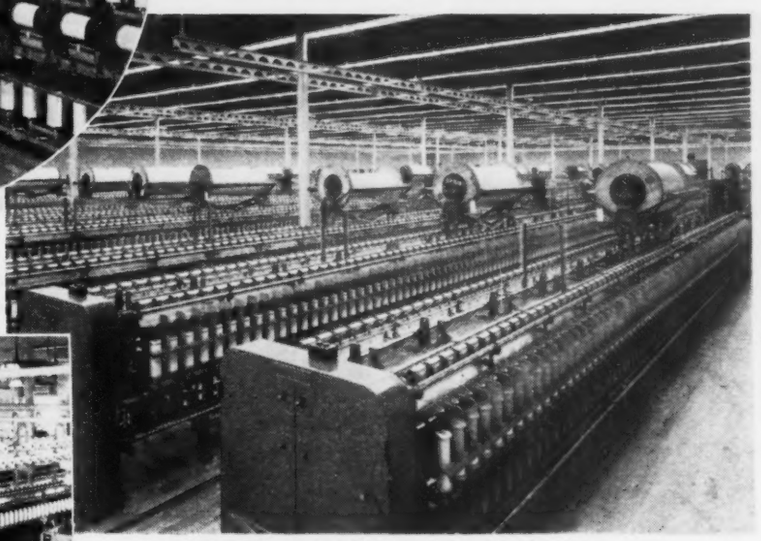
Whitin builds Twisters in great variety — Twisters for many fibers, Cotton, Woolen, Worsted, Rayon, Glass, Asbestos and Paper; also Twisters of many types, Plain or Fancy, Wet or Dry, Upstroke or Downstroke, Large or Small. There's a Whitin Twister for every purpose.

Regardless of the wide variation in specification detail and purpose, there are always *three* fixed qualities upon which you may depend —

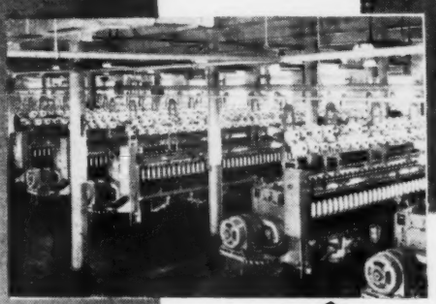
1. Top quality material and workmanship
2. Soundness of design and construction
3. Outstanding performance at high production levels.



Double-decked Upstroke Twisters at the plant of Industrial Rayon Corp., Painesville, Ohio.



Beam Twister Installation at the Excelsior #2 Mill of Deering-Milliken Co. at Clemson, S. C.



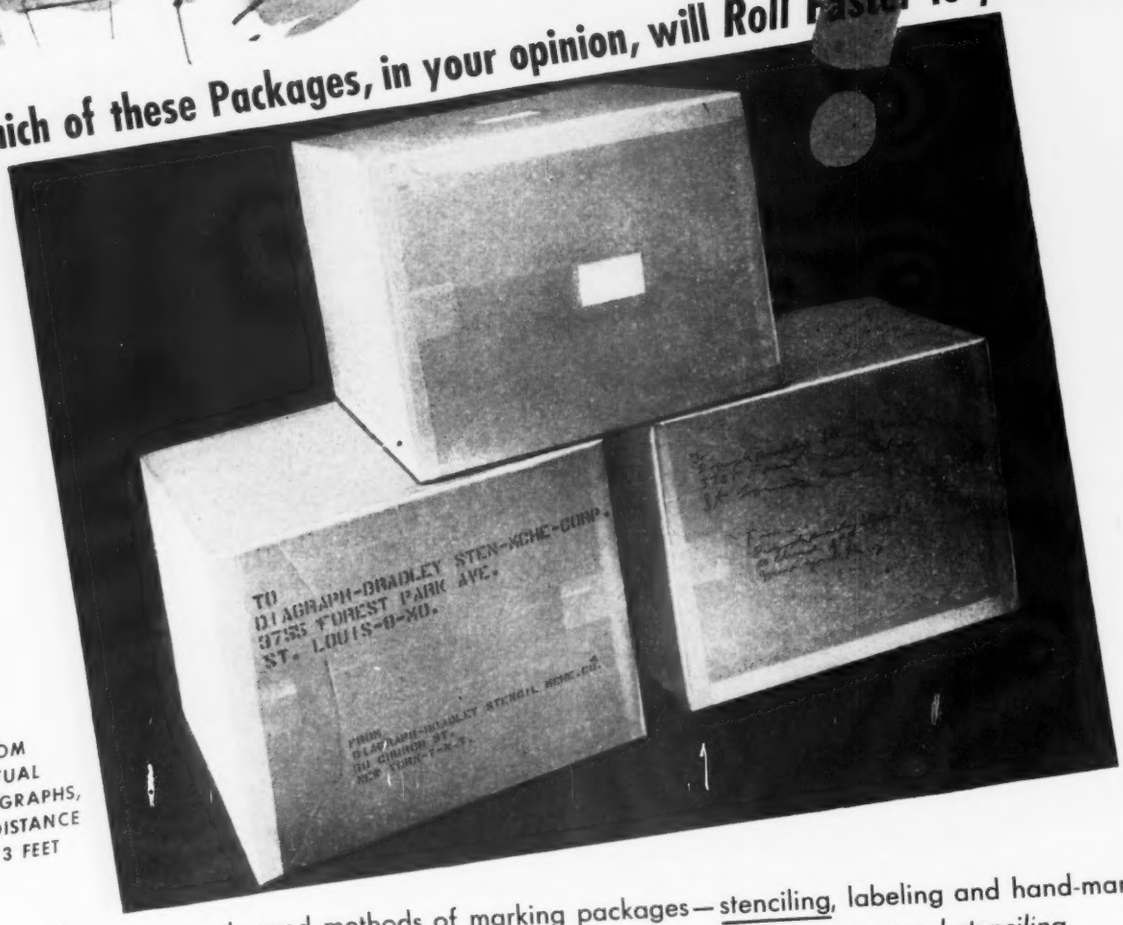
Twister Installation of Paul Whitin Mfg. Co., Northbridge, Mass.

Whitin MACHINE WORKS

WHITINSVILLE • MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA.

Which of these Packages, in your opinion, will Roll Faster to your customer?



FROM ACTUAL PHOTOGRAPHS, AT A DISTANCE OF 3 FEET

These are three commonly used methods of marking packages—stenciling, labeling and hand-marking —common carriers, such as the railroads, truckers and Railway Express, recommend stenciling.

Why take a chance— rain and damp weather obliterate type or hand written labels—avoid hand addressed mistakes—illegibility—labels coming off—lost shipments—delayed shipments.

Stencil address your shipments to keep your packages out of the carriers' Lost Shipment Warehouse.

Stenciled Shipments Roll Faster

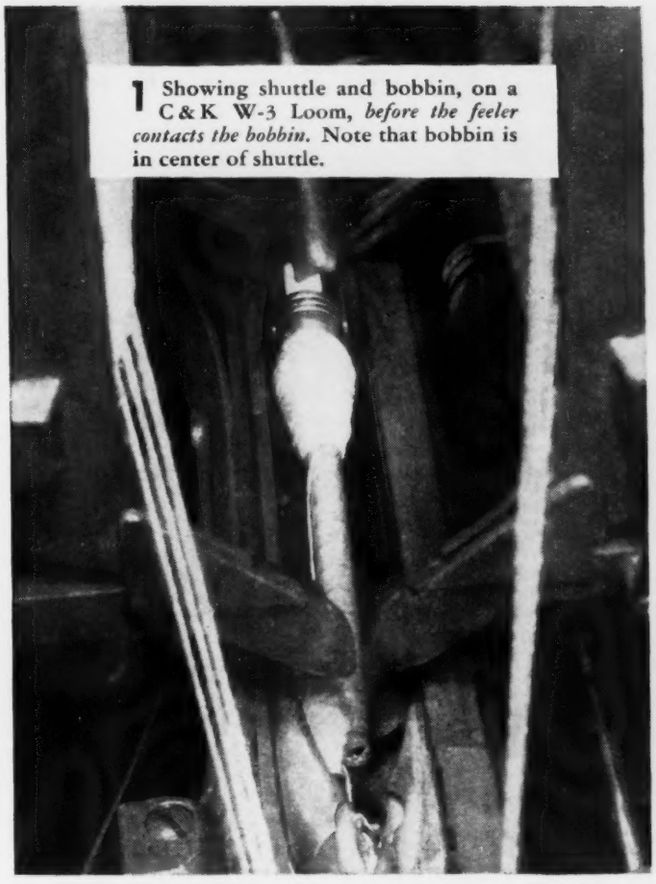
THE WORLD'S OLDEST AND LARGEST MANUFACTURER OF STENCIL CUTTING MACHINES

D.B. REG U S PAT OFF

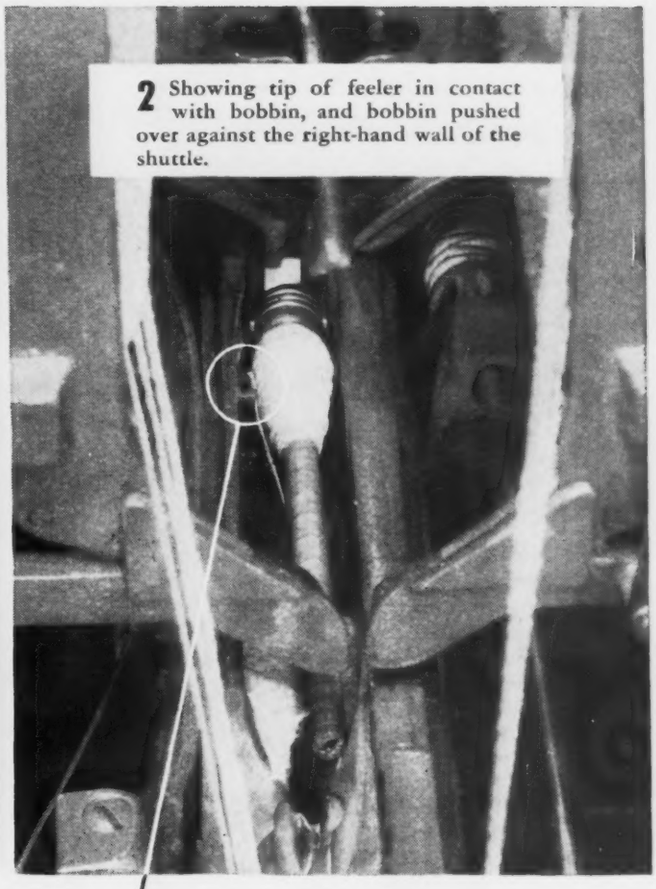
DIAGRAPH-BRADLEY
STENCIL MACHINE CORPORATION
ST. LOUIS 8, MISSOURI

DISTRIBUTORS IN PRINCIPAL CITIES—SEE CLASSIFIED SECTION—TELEPHONE DIRECTORY—STENCIL CUTTING MACHINES

OVER 100 D-B ITEMS FOR THE SHIPPING ROOM



1 Showing shuttle and bobbin, on a C&K W-3 Loom, *before the feeler contacts the bobbin.* Note that bobbin is in center of shuttle.



2 Showing tip of feeler in contact with bobbin, and bobbin pushed over against the right-hand wall of the shuttle.

Why C&K Looks for a Way

to Soften the Contact of Feelers on Bobbin

The objective of this particular C&K Research Study is to strike a delicate balance in feeler operation . . . to develop a feeler that is always positive in action on any type of yarn (hard, soft, slick, hairy), and yet will never sever the yarn. So the first step is to determine exactly how heavy a blow the feeler strikes the bobbin. And the method of determining the magnitude of this force is illustrated by these two photos, developed from a film shot by the special high-speed camera designed by C&K. Looking down through the loom's magazine, these pictures show what happens when the "side-slip" feeler contacts a full bobbin in the shuttle of a W-3 Loom. For a fraction of a second, the bobbin is thrown against the back wall of the shuttle with considerable force.

So electric strain-gages are wired to the feeler-finger. Then a recording oscillograph is hooked up to the gages to obtain a permanent record of the strain cycle. And calculations are made which indicate the magnitude of the feeler blow. Now, reading between the lines of this oscillograph record, there is explicit information to be derived as to where and how the feeler may be advantageously re-designed, both in pattern and material. Since the force of the blow is due to the acceleration of mass, it seems advisable to reduce both mass and cross-section by use of light metals . . . instead of increasing the strength of the feeler-case.

Here again is spotlighted the fact that wherever there is even the slightest room for improvement in a C&K Loom, then that improvement will be devised and adopted, regardless of time and expense. This is simply fortifying the future both for you and for ourselves . . . with *proven improvements* that increase a loom's speed, improve the quality of its output, reduce the number of its stops, and cut its cost of operation in *your* weaveroom.

Crompton & Knowles Loom Works

WORCESTER 1, MASSACHUSETTS, U. S. A.
PHILADELPHIA, PA. • CHARLOTTE, N. C. • ALLENTOWN, PA.
Crompton & Knowles Jacquard & Supply Co.
Pawtucket, R.I.

between Today's Knowledge...
and Tomorrow's Looms

Every Department Benefits when Carding is Uniform

Reclothe your Cards with

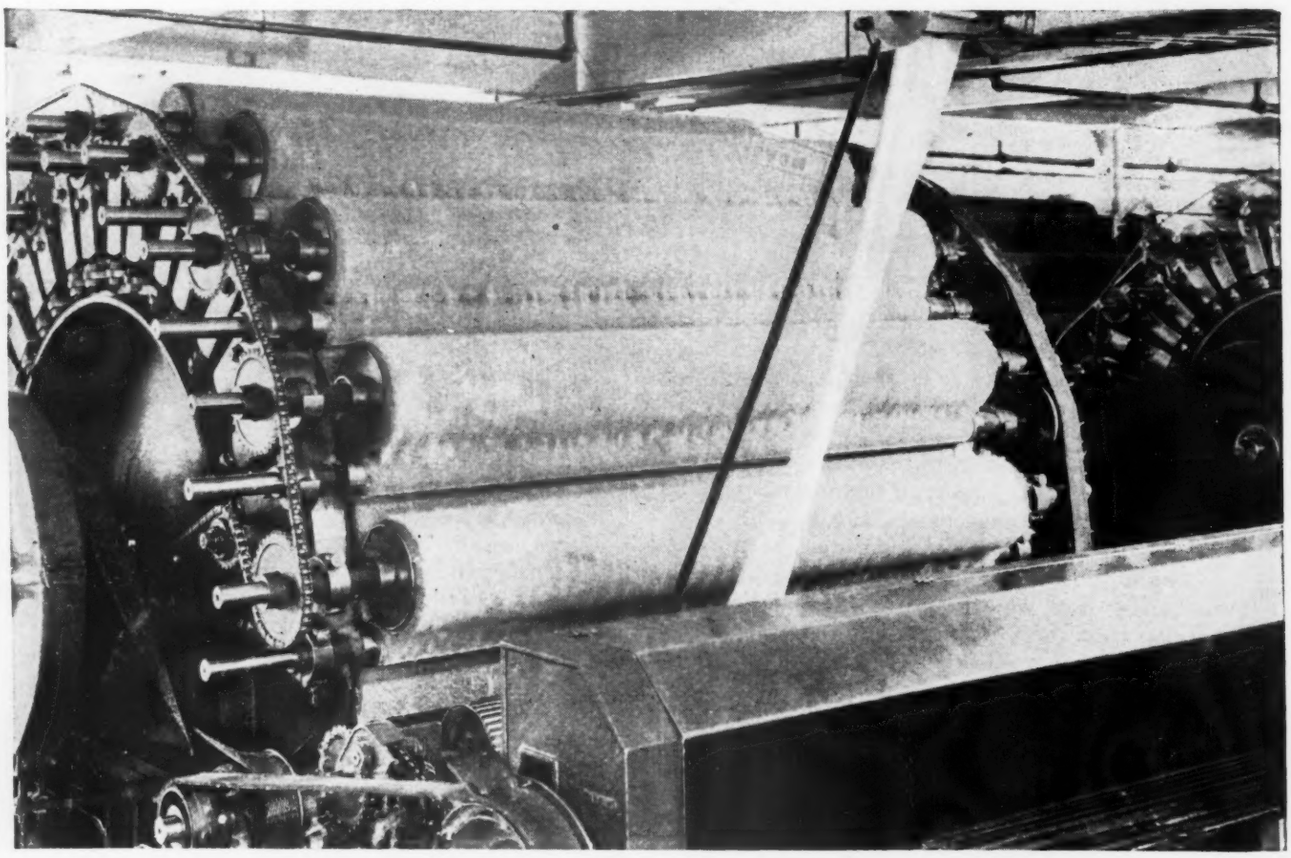
TUFFERIZED Card Clothing

TUFFER PRODUCTS

Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets. Top Flats Recovered and extra sets loaned at all Plants. Lickerins and Garnet Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant • Midgley Patented, and Howard's Special Hand Stripping Cards • Inserted Eye & Regular Wire Heddles

Expertly applied and properly operated Tufferized Card Clothing will produce the fine even web free from "nibs" so necessary for efficient spinning and weaving.

If you suspect that uneven carding is hampering your spinning room and weave room have a Howard representative inspect your card clothing. He will detect and report the cause and make suitable recommendations.



HOWARD BROS. MFG. CO.

WORCESTER, MASSACHUSETTS

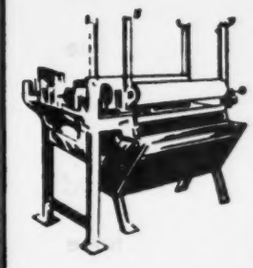
Southern Plants: Atlanta, Ga., Gastonia, N. C. **Branch Offices:** Philadelphia, Pa., Blanco, Tex. **Canadian Agents:** Colwool Accessories, Ltd., Toronto 2

AHCOBOND S

Trade Mark Reg. Patented

A WATER SOLUBLE RESIN BINDER

100% COLD WATER SOLUBLE

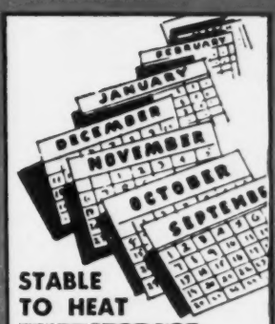


EASY TO APPLY
No special equipment. No curing.

CLEAN WORKING
Will not cause sticky or gummy deposits on equipment.

DRIES TO GLASS CLEAR FILM
Insures brilliant colors.

EFFICIENT BINDER
Reduces fly and shedding.



STABLE TO HEAT AND STORAGE
Will not develop discoloration or odor.

PRESERVES COLORS
Will not dull them or accelerate fading.

MORE ECONOMICAL
than older types of binders.

AHCOBOND S was developed to fill the need for a stable, water soluble resin binder, free from organic solvent, for use with starches, gums, fillers and softeners in warp sizing, back filling and similar operations. Its water solubility and stability make for greatest ease in handling; yet it gives maximum binding action and adds flexibility and toughness to starch finishes.

Bulletin 121 on request.

ARNOLD, HOFFMAN & CO., INC.

MANUFACTURING CHEMISTS

ESTABLISHED 1815 • PLANTS AT DIGHTON, MASS. AND CHARLOTTE, N. C.

PROVIDENCE, RHODE ISLAND

NEW YORK BOSTON PHILADELPHIA CHARLOTTE

Textile mill tested several paints— now 100% pleased with choice of...

PHILIP A. MORELAND
PRESIDENT AND GENERAL MANAGER

ERNEST N. HOOD
TREASURER

FREDERICK C. HALL
GENERAL SUPERINTENDENT

OLD COLONY MANUFACTURING CORPORATION

TAUNTON, MASSACHUSETTS

COTTON YARNS FROM 1's TO 80's
SINGLE AND PLY
TUBES, CONES
SECTION BEAMS, BALL WARPS
DRESSED ON LOOM BEAMS

WIDE COTTON FABRICS
48 INCHES TO 100 INCHES
MECHANICAL FABRICS
SPECIALTY FABRICS

Mar. 25, 1946

The Waldron Hardware Co.,
44 Weir Street,
Taunton, Mass.

Attention - Mr. R. H. Park

Gentlemen: -

Re: - Spray-Day-Lite

Last summer we had several discussions with your firm about our painting problems at Old Colony. A complete paint job inside and out was long over-due, but labor and material shortage prevented the execution of our plans. Because of both factors a little more than the ordinary effort was expended on this matter, since it was recognized that maximum results must be accomplished with minimum labor.

At your suggestion several brands of mill whites were finally tested in our plant, with the final decision in favor of Glidden's Spray-Day-Lite which was so ably demonstrated by their representative, Mr. W. C. Fletcher. This letter is written to you to say how pleased we are with the results which are fully up to our expectations and fully justify your recommendations.

Our painters are very pleased with the way Spray-Day-Lite covers, and the appearance of the plant is most gratifying with a light reflection well above our hopes. There was no disruption of work and fog was held to a minimum during its application.

Enclosed are two photos; one of our Taunton Plant and the other our Manchester, N. H. Plant, just purchased. In the latter plant we originally planned to use another brand for comparison, but were so satisfied with Spray-Day-Lite here in Taunton that it was decided to stick to this brand.

Please convey our appreciation to Mr. Fletcher and with thanks to you for the manner you have helped us with this and many other previous problems, we remain

Sincerely yours,

Old Colony Manufacturing Corporation

Philip A. Moreland

Philip A. Moreland, Pres.

FAM/S

Now there's also

BRUSH-DAY-LITE

All of the established advantages of famous GLIDDEN SPRAY-DAY-LITE are now offered you in BRUSH-DAY-LITE, especially formulated for brush application.

Glidden

SPRAY-DAY-LITE

A Demonstration in your own plant will prove superior qualities of one-coat Glidden maintenance paint

Before *your* next interior painting, let us send a paint engineer to demonstrate Glidden SPRAY-DAY-LITE on any surface you select. If your reactions are anything like those of the Old Colony Manufacturing Corporation and so many other textile mills, you will standardize on this better finish *permanently*. And enjoy better painting results all these ways . . .

1. **SPRAY-DAY-LITE gives conventional two-coat results in only one coat.**
2. **Increases lighting efficiency by giving *maximum* light reflection and diffusion.**
3. **Provides smooth, solid covering over grimy, dirty and badly discolored surfaces of almost any type.**
4. **Its intense white does not yellow with age—also available in 10 beautiful colors.**
5. **Durable, egg-shell finish eliminates eye-straining glare—washes like tile.**
6. **Sprayed or brushed, it does not sag or run; produces little fog or mist when sprayed.**

For your demonstration, SPRAY-DAY-LITE Color Chart or both, fill out and return coupon *today*.

TIME-TESTED

Pacemaker in Paints

SEND FOR THIS VALUABLE FREE BOOK ON "SIGHT PERFECTION"

Tells and *shows* you how to follow scientific, E-Z-C Color-Planning in painting machines and interiors to ease eyestrain, boost production, reduce accidents. If all the guidance you need isn't in this book, a request to the Glidden Color Studio will bring you further help from our color engineers.

THE GLIDDEN COMPANY
Dept. T-6, 11001 Madison Ave., Cleveland 2, Ohio

- ☐ You may send your new SPRAY-DAY-LITE Color Chart showing the 10 beautiful shades and suggested color combinations.
- ☐ You may have representative call and demonstrate SPRAY-DAY-LITE in our premises without obligation on our part.
- ☐ You may send your free book, "Sight Perfection".

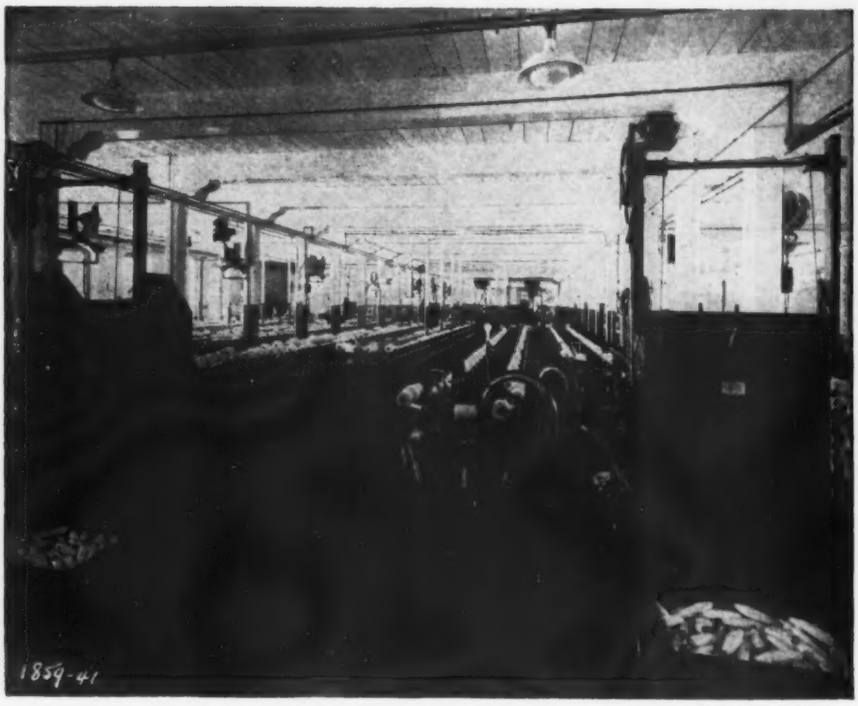
NAME _____

COMPANY _____ TITLE _____

ADDRESS _____

CITY AND STATE _____

ABBOTT AUTOMATIC WINDERS



Winding Average hourly production per operator 900 to 1000 bobbins per hour

2-oz.	Bobbin	112 lb. hr.
3-oz.	"	169 " "
4-oz.	"	224 " "
5-oz.	"	280 " "
6-oz.	"	338 " "
7-oz.	"	380 " "
8-oz.	"	448 " "

These production figures are being obtained in mills throughout the United States and Canada, and show the lowest direct labor cost of winding.

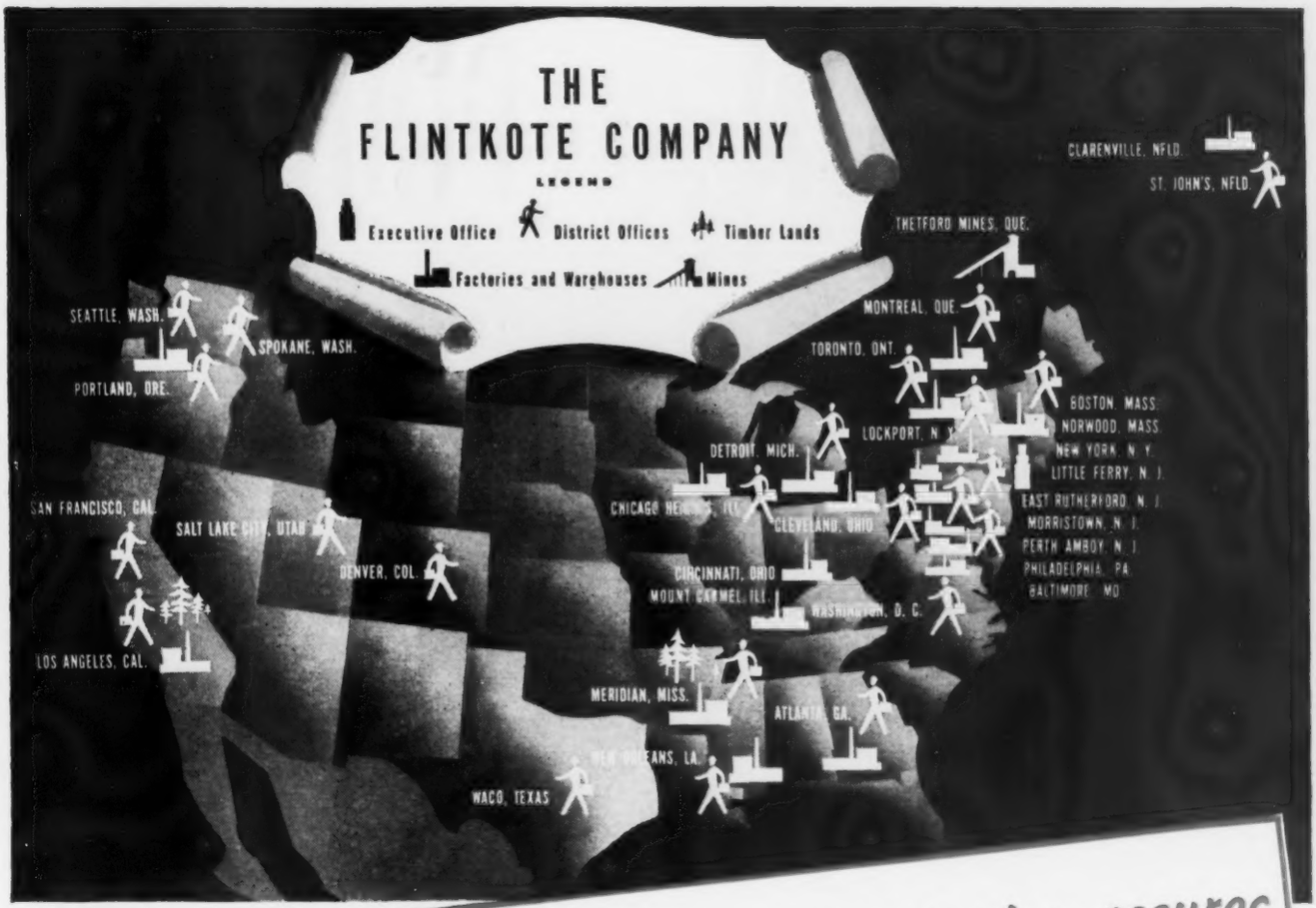
In addition there is a great saving in floor labor to supply the winders with spinning bobbins and remove wound cones or cheeses.

Supply bobbins are dumped by the doffers into a box at floor level. A lever is pushed and the box is lifted and dumped automatically into a big hopper. These are large enough to eliminate any other storage of yarn. There is no trucking of yarn up and down winder alleys and distributing it along the machines. It is all fed in at one point. Similarly cones are all doffed at end of winder, and move directly into warper creels or to twisters or automatic quillers.

ABBOTT MACHINE COMPANY

WILTON, N. H.

Southern Representative, Mr. L. S. Ligon, Greenville, S. C.



"Flintkote's wide distribution assures better service... faster delivery"

Yes, sir. The Flintkote Company is organized on a nation-wide basis to furnish the materials you need . . . from a nearby point.

And, Flintkote's Service Technicians are always available to help you with new products, new uses, new methods.

A Flintkote SYNTEX* aqueous dispersion of rubber or resin, or a specially formulated synthetic latex compound may be just what you require for impregnating, combining or coating jobs. FLINTDEK† provides a water, oil and grease-resistant, non-slip surface for floors and steps. HYDRALT* will give you a non-sagging, non-cracking protective coating for metal or masonry exposed to moisture.

So, for prompt solutions to your product or maintenance problems, call or write your nearest Flintkote office listed below.

•

OTHER FAMOUS FLINTKOTE INDUSTRIAL PRODUCTS INCLUDE: Waterproofing and dampproofing materials; Industrial adhesives; Flooring Emulsions for heavy-duty mastic floors; Expansion Joint Sealer and Fillers.

† Trademark

*Reg. U. S. Pat. Off.

Flintkote-Products for Industry

THE FLINTKOTE COMPANY · INDUSTRIAL PRODUCTS DIVISION

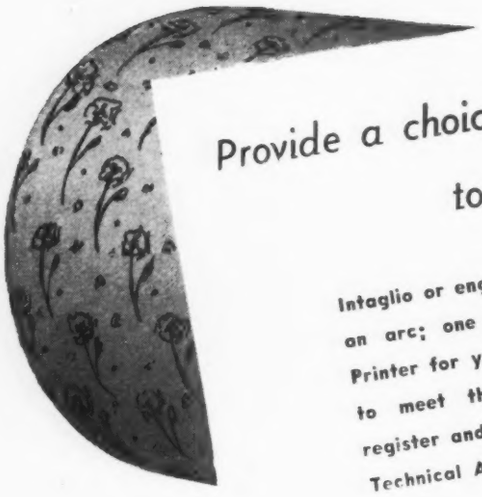
Atlanta · Boston · Chicago Heights · Detroit · Houston

FLINTKOTE INDUSTRIAL PRODUCTS

30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

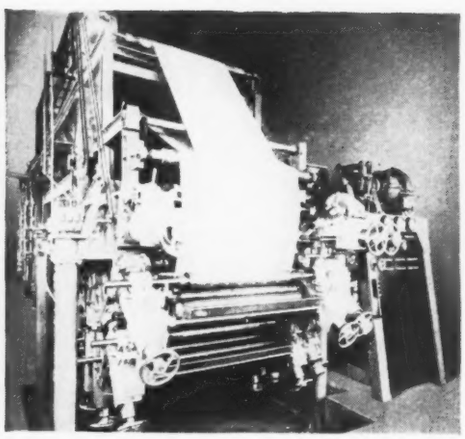
Los Angeles · New Orleans · Washington · Toronto · Montreal

WALDRON *Textile* PRINTERS

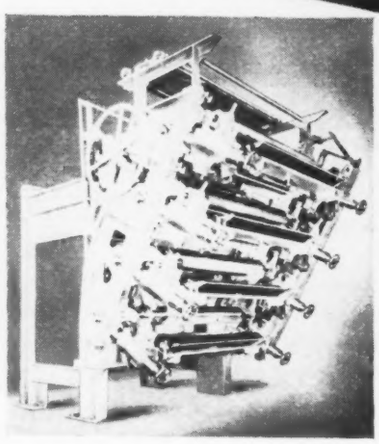


Provide a choice of methods to best meet specific requirements

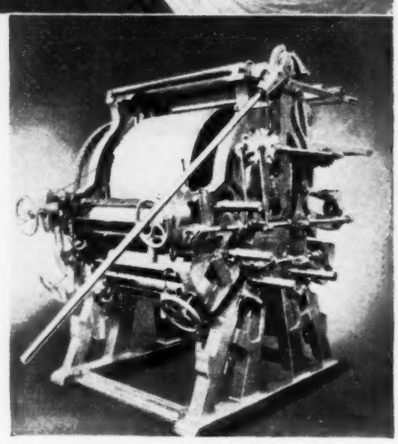
Intaglio or engraved roll; prints mounted vertically or around an arc; one color or eight—there's a modern WALDRON Printer for your job. Each WALDRON machine is engineered to meet the most exacting requirements in impression, register and speed as their performance records prove. Our Technical Advisory Service is available to you.



Waldron 8 color intaglio printer, individual impression roll type. Small diameter backing roll allows sharper impression on material being printed.



Waldron intaglio printer with prints mounted in vertical position instead of around portion of an arc.



Waldron 6 color engraved roll-printer with colors grouped around a large master impression cylinder. Ideal where very close register is essential.

JOHN WALDRON CORP.

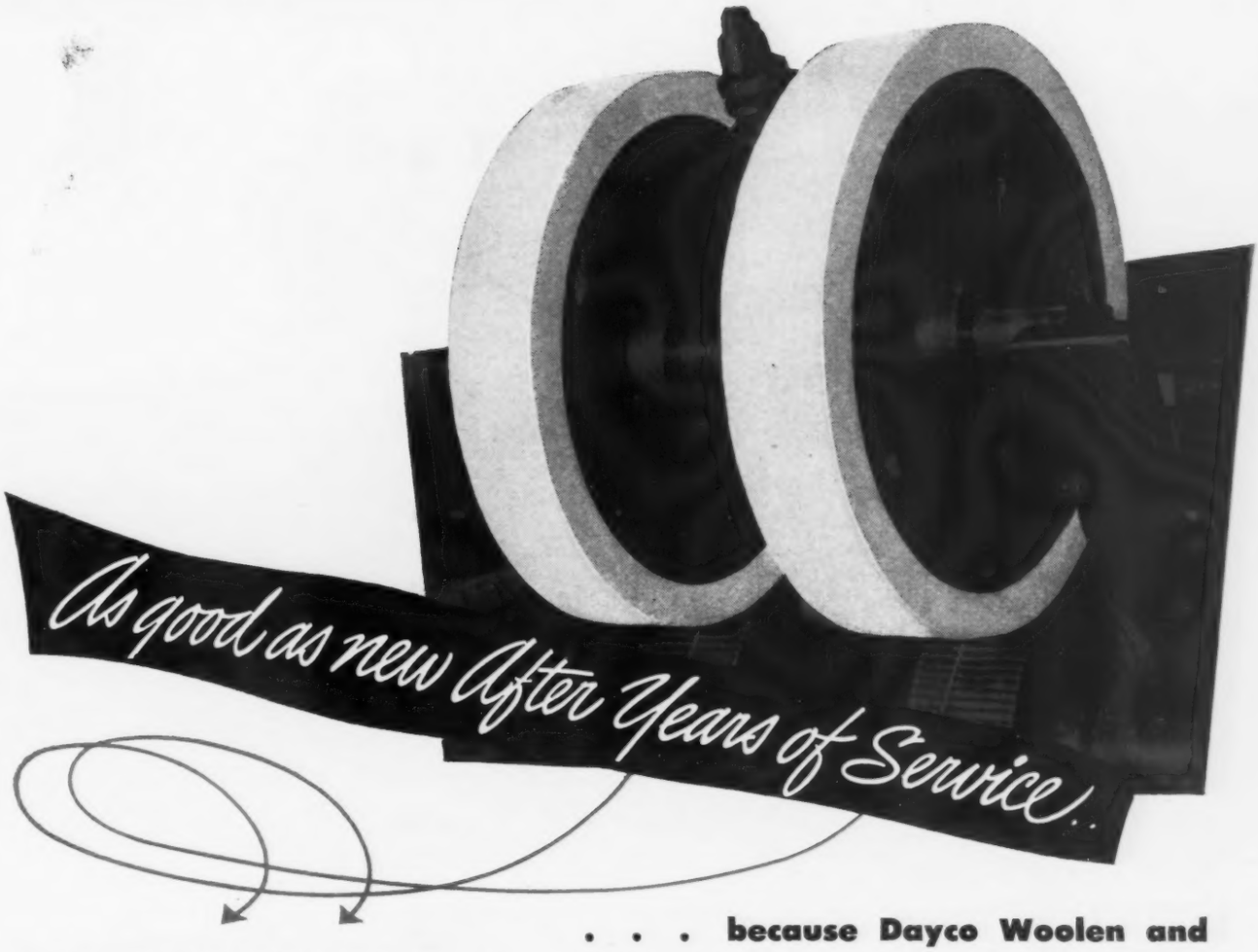
Main Office & Works – NEW BRUNSWICK, NEW JERSEY

CHICAGO - 6
201 N. WELLS ST.

NEW YORK - 17
350 MADISON AVE.

BOSTON - 9
79 MILK ST.

BUILDERS OF QUALITY MACHINES SINCE 1827



AND HERE ARE A FEW FEATURES OF THESE FAMOUS DAYCO COTS . . .

1. Dayco Woolen and Worsted Cots last at least 12 times longer than others.

2. They simplify production schedules. More production of wanted numbers.

3. Any combination of wool, rayon and mohair can be run equally well with a minimum of lint.

4. Much less matching up required since they produce highest yarn uniformity.

5. Roll replacement kept at minimum.

6. They save up to two-thirds of the time required in applying arbors.

7. Save time and labor formerly spent readjusting pressures after shutdowns.

8. They reduce your power requirements.

. . . because Dayco Woolen and Worsted Cots are engineered to last

There just doesn't seem to be any "wear-out" to a Dayco Cot. As one year after another passes by, they establish new life records. Today, they are outlasting other types 12 to 1! But that's not all. Records continue to come in from mills everywhere which prove Dayco Cots produce more uniform yarn.

Dayco Cots, like other Dayton Textile Products, are made in a factory devoted exclusively to the development, manufacture and production testing of synthetic rubber products for the textile industry. This factory is located in the heart of the textile area so that we are on the doorstep of the problems, trends and everyday workings of the textile industry.

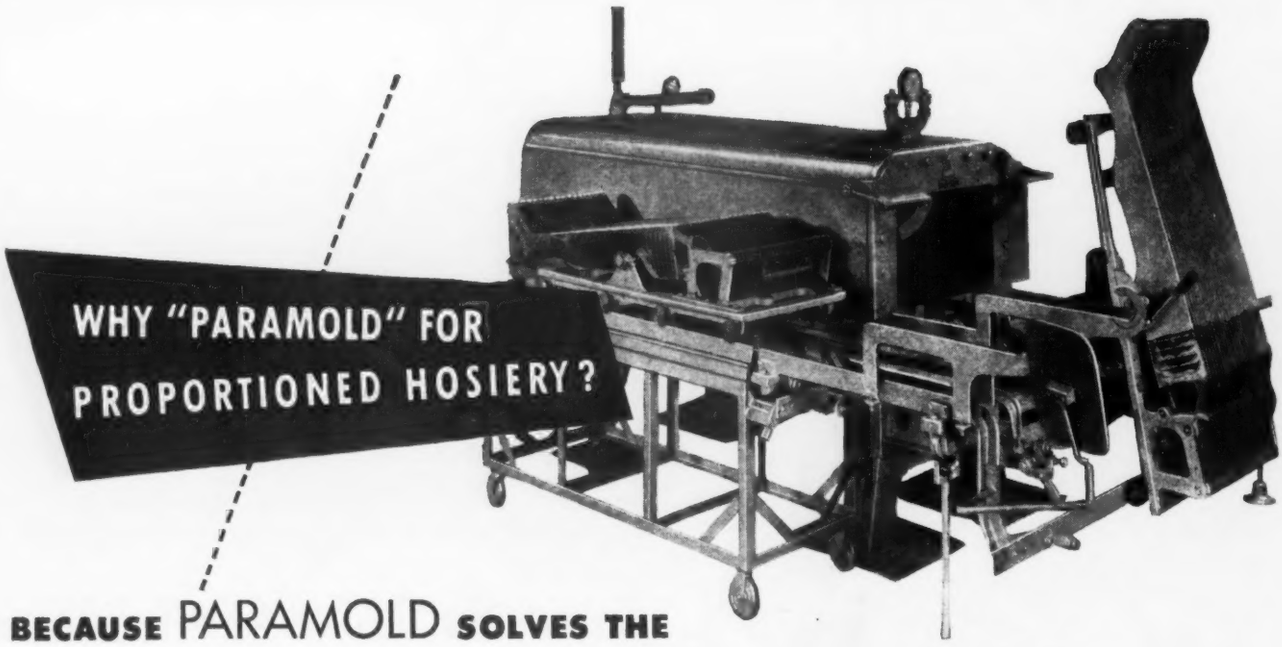
No matter what your production problems are, bring them to us; perhaps we can find a better way with synthetics.

THE DAYTON RUBBER MANUFACTURING COMPANY
FACTORY: WAYNESVILLE, N. C.
MAIN SALES OFFICES: WOODSIDE BUILDING, GREENVILLE, S. C.

Dayton Rubber

THE MARK OF TECHNICAL EXCELLENCE IN NATURAL AND SYNTHETIC RUBBER

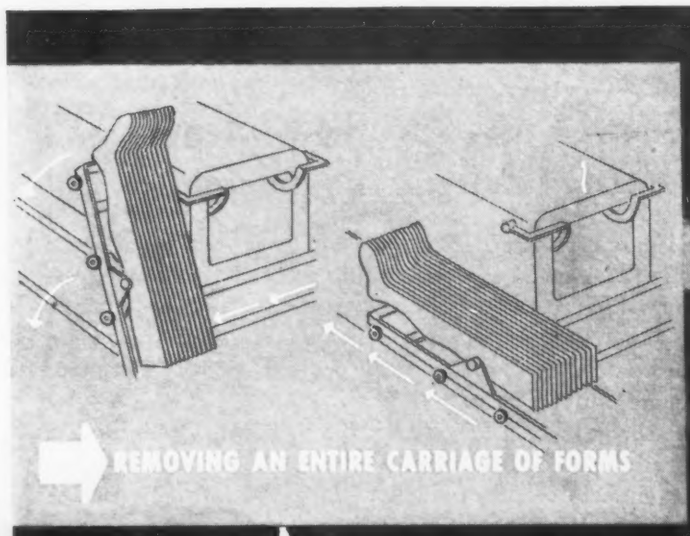
FAMOUS DAYCO SYNTHETIC RUBBER PRODUCTS SINCE 1934



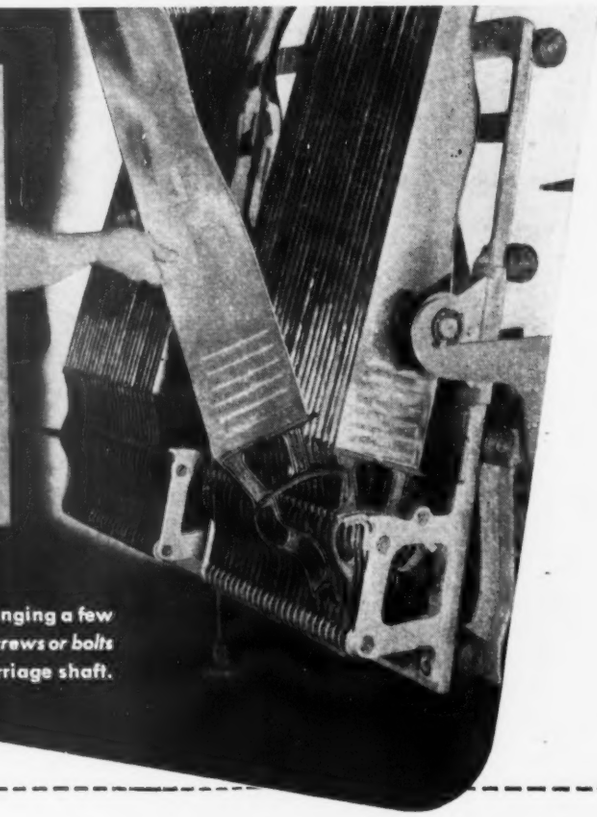
WHY "PARAMOLD" FOR PROPORTIONED HOSIERY?

BECAUSE PARAMOLD SOLVES THE PROBLEM OF HANDLING A MULTITUDE OF FORM CHANGES . . .

Remove an ENTIRE CARRIAGE of 24 Forms, or Single Forms, in a few minutes!



REMOVING AN ENTIRE CARRIAGE OF FORMS



CHANGING A FEW FORMS

Rapid-Change Mounting facilitates changing a few forms of a set. *Without unfastening any screws or bolts* the form and base is lifted from the carriage shaft.

Paramold "24" RETORTS

PARAMOUNT TEXTILE MACHINERY CO.

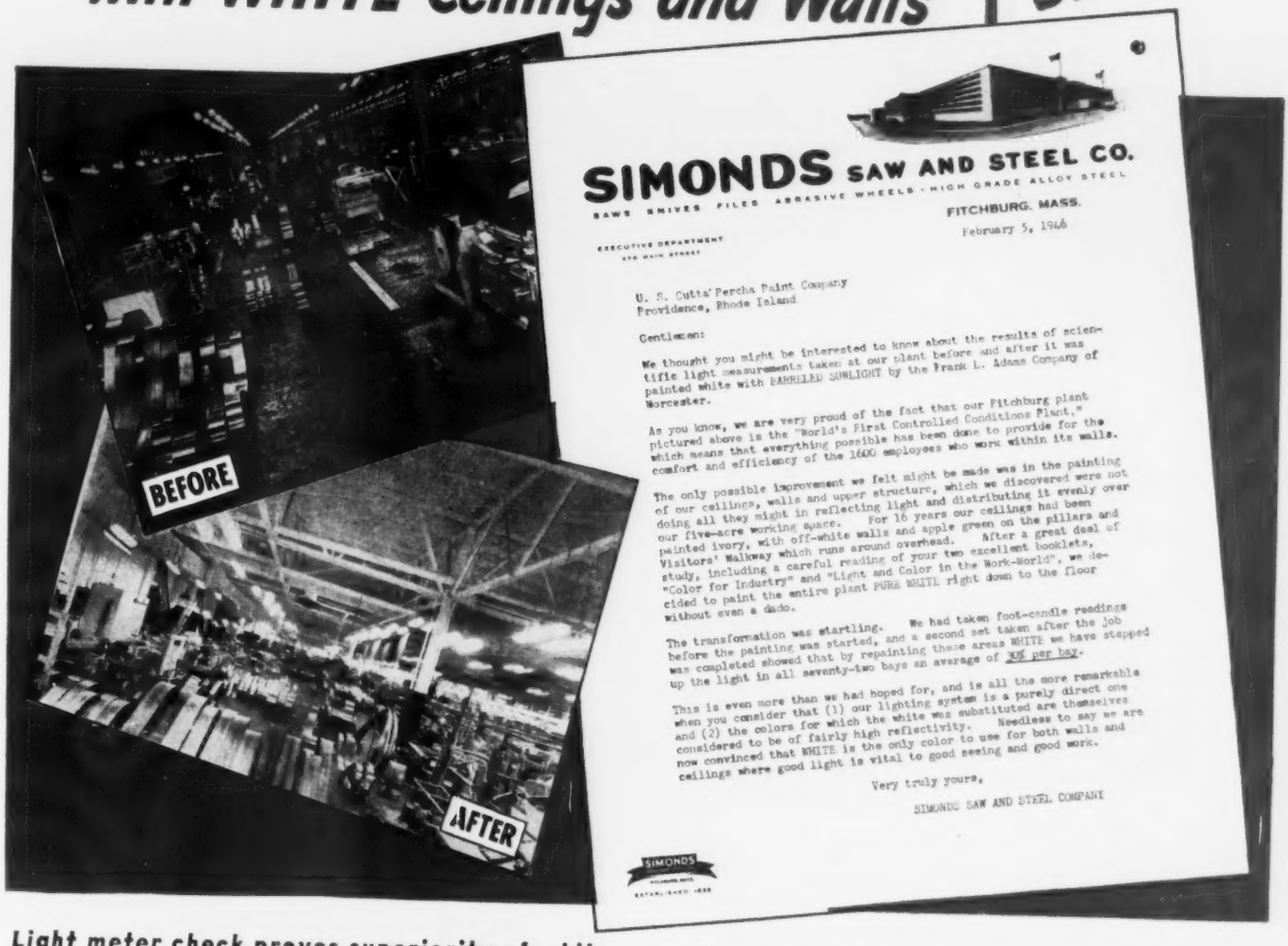
Main Sales Office

538 S. Wells St. • Chicago 7, Ill., U. S. A. • Phone WABash 6161

FACTORY—KANKAKEE, ILLINOIS • CABLE ADDRESS PARFORM

PARAMOLD RETORTS • DUNN PRESETTING EQUIPMENT • WOMEN'S HI-SPEED HOSIERY FINISHING MACHINES • WOMEN'S DUAL HEAT HOSIERY FINISHING MACHINES • AIR-COOLED HOSIERY FINISHING TABLES • REGULAR HOSIERY DRYING FORMS • FABRIC HOLDERS • PARAFLEX CHANGEABLE CONTOUR & SIZE FORMS • HOSIERY INSPECTION MACHINES • LOOPER CHAIN CUTTING ATTACHMENTS • DYEHOUSE FORM UNITS

"30% MORE LIGHT with WHITE Ceilings and Walls" } says Simonds


BEFORE
AFTER
SIMONDS SAW AND STEEL CO.
SAWS KNIVES FILES ABRASIVE WHEELS · HIGH GRADE ALLOY STEEL
FITCHBURG, MASS.
February 5, 1946
EXECUTIVE DEPARTMENT
U. S. Gutta Percha Paint Company
Providence, Rhode Island
Gentlemen:
We thought you might be interested to know about the results of scientific light measurements taken at our plant before and after it was painted white with BARRELED SUNLIGHT by the Frank L. Adams Company of Worcester.
As you know, we are very proud of the fact that our Fitchburg plant pictured above is the "World's First Controlled Conditions Plant," which means that everything possible has been done to provide for the comfort and efficiency of the 1600 employees who work within its walls.
The only possible improvement we felt might be made was in the painting of our ceilings, walls and upper structure, which we discovered were not doing all they might in reflecting light and distributing it evenly over our five-acre working space. For 16 years our ceilings had been painted ivory, with off-white walls and apple green on the pillars and Visitors' Walkway which runs around overhead. After a great deal of study, including a careful reading of your two excellent booklets, "Color for Industry" and "Light and Color in the Work-World", we decided to paint the entire plant PURE WHITE right down to the floor without even a dado.
The transformation was startling. We had taken foot-candle readings before the painting was started, and a second set taken after the job was completed showed that by repainting these areas WHITE we have stepped up the light in all seventy-two bays an average of 30% per bay.
This is even more than we had hoped for, and is all the more remarkable when you consider that (1) our lighting system is a purely direct one and (2) the colors for which the white was substituted are themselves considered to be of fairly high reflectivity. Needless to say we are now convinced that WHITE is the only color to use for both walls and ceilings where good light is vital to good seeing and good work.
Very truly yours,
SIMONDS SAW AND STEEL COMPANY
SIMONDS

Light meter check proves superiority of white paint for ceilings and walls in working areas

A CONVINCING DEMONSTRATION of what WHITE paint on plant ceilings and walls can do to increase light and improve seeing conditions is described in the above letter from Simonds Saw and Steel Company.

The light measurements referred to were made by Simonds' own engineers. They proved *conclusively* that by repainting in WHITE the areas which for sixteen years had been painted in color, they had increased the light 30% as well as greatly improving its quality.

Unless *your* plant is the 1-in-100 which has enough light for easy, accurate seeing, it will pay you to take advantage of Simonds' experience. For full details on the relationship between Light, Paint and Seeing, send for a free copy of "Color for Industry". To get your copy, just fill out and mail us the coupon below TODAY.

BARRELED SUNLIGHT

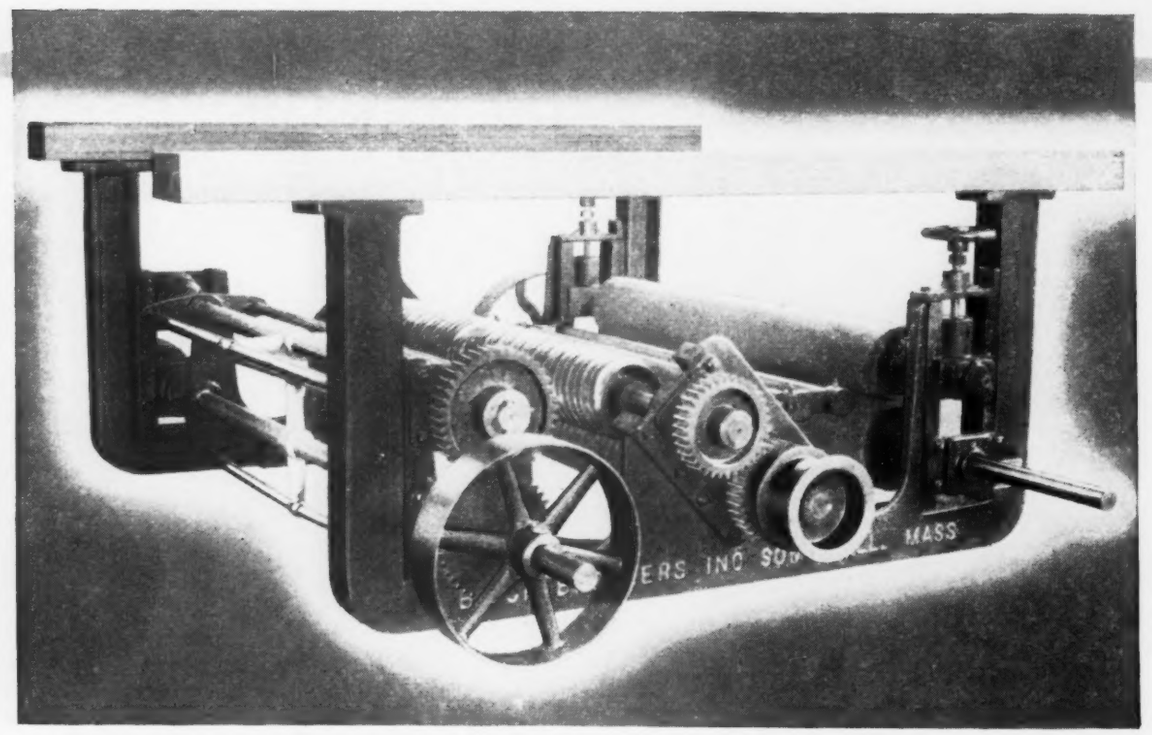
SPECIALISTS FOR NEARLY FIFTY YEARS IN MAINTENANCE PAINTS FOR INDUSTRY

U. S. GUTTA PERCHA PAINT COMPANY
20F Dudley Street, Providence 1, Rhode Island

Please send me, without charge or obligation, a copy of your 16-page illustrated booklet entitled "Color for Industry."

COMPANY .....
STREET AND NUMBER .....
CITY ..... ZONE ..... STATE .....
ATTENTION .....
TITLE .....

The bearings take a shaking, too!



Shake them *gently* when it's sheer rayon; shake them *plenty* when it's 32 oz. Melton or plush . . . those are the two extremes this scutcher has to meet. The Fafnir-mounted beaters are handling sheer materials smoothly and at high speed and when called for, operating equally efficiently in shaking out the heaviest fabrics.

Birch Brothers, Somerville, Mass., chose wisely when they picked Fafnir Wide Inner Ring Ball Bearings for their ball bearing scutcher. It wasn't only the deeper races and the larger balls of the Fafnir Balanced Design, which gives extra thrust capacity. They liked the easy way these bearings slide on and off a shaft and lock to it and unlock from it with three simple motions . . . without shaft shouldering or any machining. The extra shaft support of the wide inner ring is a help in giving machines extra sturdiness.

That's the meaning of "the most complete line in America" . . . a full stock of bearings from which you can always get the bearing you wouldn't expect to be a stock bearing . . . ideally fitted to your special needs. The Fafnir Bearing Company, New Britain, Connecticut.

These three simple steps lock the **Wide Inner Ring Bearing** *to the shaft:*

MOST COMPLETE LINE IN AMERICA

FAFNIR BALL BEARINGS

Though few can custom-blend textiles and leathers into one harmonious creation, every woman visions her next ensemble as the perfect symphony of color. And shops weary miles to give her dream reality.

National Aniline, sole American producer of every class of aniline dye and color, has an intimate knowledge of the inter-related color problems of the textile, leather, cosmetics and the accessories fields. This unduplicated experience is yours through nearby National Technical Service.

WHEREVER COLOR IS USED

National Aniline

DIVISION OF

ALLIED CHEMICAL & DYE CORPORATION

40 RECTOR STREET NEW YORK 6, N. Y.

BOSTON · PROVIDENCE · PHILADELPHIA · CHICAGO · SAN FRANCISCO · CHARLOTTE
GREENSBORO · ATLANTA · NEW ORLEANS · CHATTANOOGA · PORTLAND, ORE. · TORONTO

NATIONAL N DYES

Costume by Monte Sano

L. F. Dommerich & Company

Executive and General Offices

271 MADISON AVENUE
NEW YORK, N. Y.

Telephone: AShland 4-8650

FACTORS

For Manufacturers and Merchants

Inquiries as to our services solicited

●

ESTABLISHED 1840

Though few can custom-blend textiles and leathers into one harmonious creation, every woman visions her next ensemble as the perfect symphony of color. And shops weary miles to give her dream reality.

National Aniline, sole American producer of every class of aniline dye and color, has an intimate knowledge of the inter-related color problems of the textile, leather, cosmetics and the accessories fields. This unduplicated experience is yours through nearby National Technical Service.

WHEREVER COLOR IS USED

National Aniline

DIVISION OF

ALLIED CHEMICAL & DYE CORPORATION

40 RECTOR STREET NEW YORK 6, N. Y.

BOSTON · PROVIDENCE · PHILADELPHIA · CHICAGO · SAN FRANCISCO · CHARLOTTE
GREENSBORO · ATLANTA · NEW ORLEANS · CHATTANOOGA · PORTLAND, ORE. · TORONTO

NATIONAL N DYES

Costume by Monte Sano

L. F. Dommerich & Company

Executive and General Offices

271 MADISON AVENUE
NEW YORK, N. Y.

Telephone: AShland 4-8650

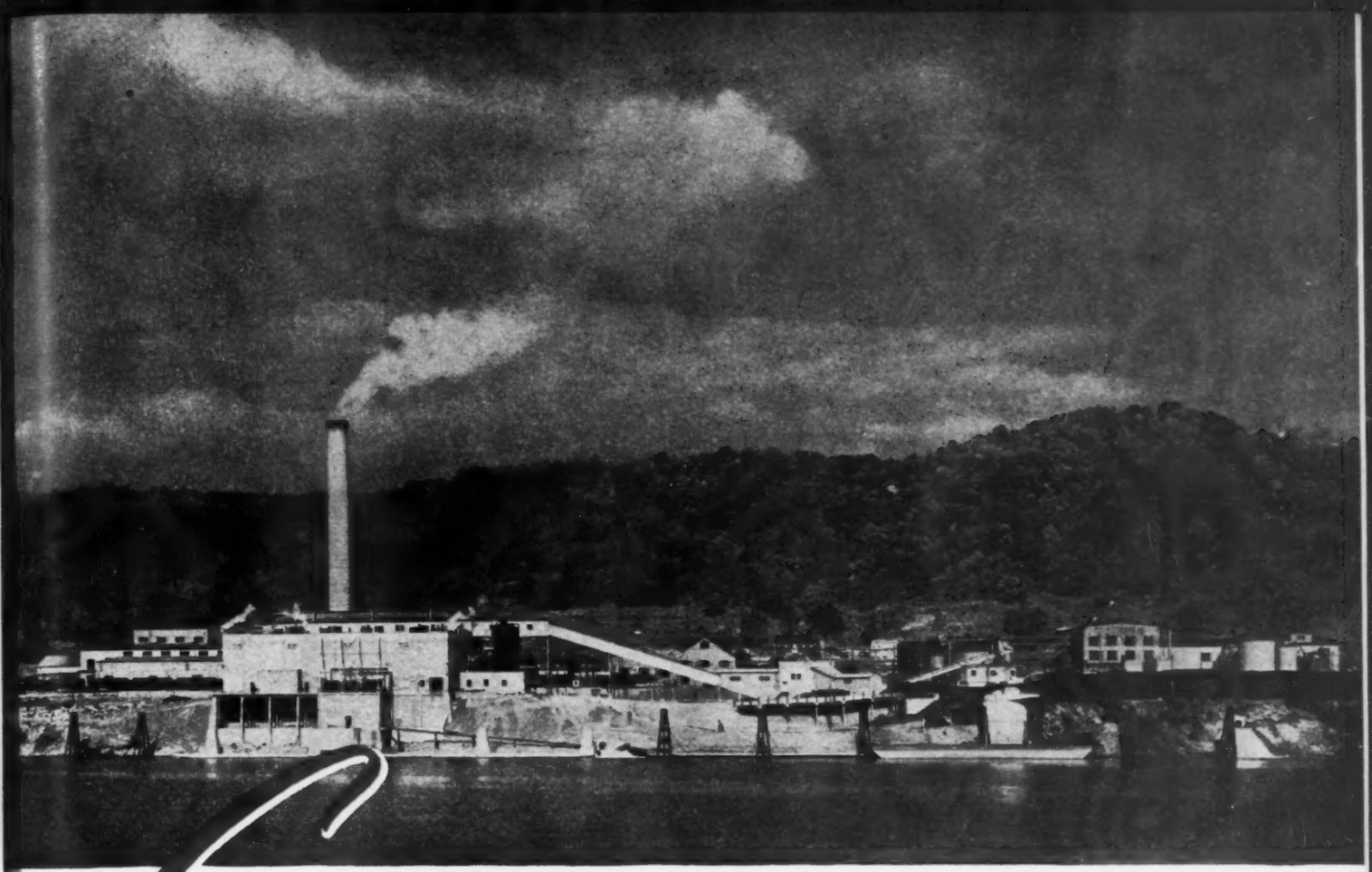
FACTORS

For Manufacturers and Merchants

Inquiries as to our services solicited

●

ESTABLISHED 1840



Photo—Gottscho-Schleisner

Columbia buys Natrium, W. Va. Plant

The chlorine-caustic soda plant at Natrium, W. Va., has just been added to Columbia's facilities.

Built and operated by Columbia for the Defense Plant Corporation, the Natrium Plant bids to be a major factor in serving peacetime industry just as it was in producing gigantic quantities of chlorine and caustic soda for critical war industries.

This important plant, added to the facilities at Barberton, Ohio, and Corpus Christi*, Texas, is a step in Columbia's expansion program planned to meet the demand of industry for these essential chemicals.

*Southern Alkali Corporation (A Columbia Affiliate)

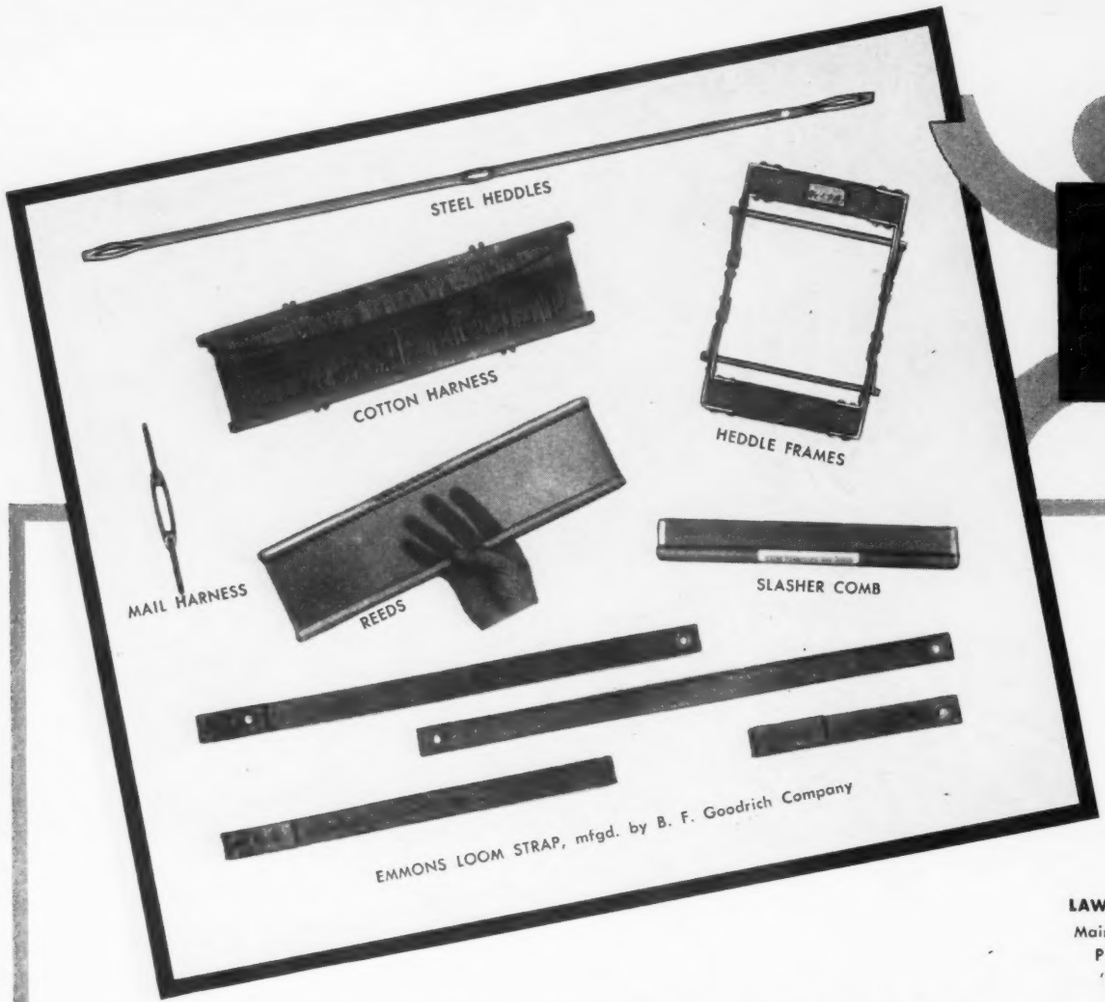
COLUMBIA CHEMICALS

PITTSBURGH PLATE GLASS COMPANY
COLUMBIA CHEMICAL DIVISION
FIFTH AVENUE at BELLEFIELD • PITTSBURGH 13, PA.

CHICAGO • BOSTON • ST. LOUIS • PITTSBURGH • NEW YORK • CINCINNATI • CLEVELAND
PHILADELPHIA • MINNEAPOLIS • CHARLOTTE • SAN FRANCISCO

COLUMBIA ESSENTIAL INDUSTRIAL CHEMICALS

Soda Ash • Caustic Soda • Liquid Chlorine • Sodium Bicarbonate • Pittchlor (Calcium Hypochlorite) • Silene EF (Hydrated Calcium Silicate) • Calcium Chloride • Soda Briquettes • Caustic Ash • Phosflake • Calcene T (Precipitated Calcium Carbonate) • Modified Sodas.



YOU CAN GET THEM ALL FROM THE E-MAN

The E-Man can save you a lot of correspondence, telephone calls and leg work, for he offers you 7 different products that you might otherwise have to purchase from 7 different sources. Just one letter, one 'phone call, or one interview and your requirements for all these products are taken care of. As to quality, it's inspected and certified in every case.

Emmons Service is efficient in another way, too, in that there's an E-Man in your vicinity, no matter in which textile area you are located. His address and 'phone number are given here for your convenience. Get in touch with him the next time you need the products he offers.

EMMONS LOOM HARNESS CO., Factories in Lawrence, Mass., and Charlotte, N. C. Branch offices as listed.

EXPORT AGENTS: ARGENTINA: Storer & Cia., Chacabuco 443-49, Buenos Aires; BRAZIL: A. Polak, 216 Av. Beira Mar, Rooms 403 a-d, Edificio Magnus, Rio De Janeiro and Rua Florencio, Abrew 157, Edificio Sao Bento, Salas 510 A.C., Sao Paulo; CHILE: W. L. Robinson, Casilla 4075, Santiago; COLOMBIA: C. E. Halaby & Co., Apartado 139, Medellin; CUBA: J. M. Perez Pena, Apartado 1611, Habana; MEXICO: Leo Lenk, Ave. Republica Guatemala 4, Mexico, D.F.; PERU: Constantino N. Sabal, Apartado 2288, Lima; VENEZUELA: N. Marvez, Apartado 391, Caracas; URUGUAY: Storer & Cia, Paysandu 1202, Montevideo.

LAWRENCE, MASS.
Main Office & Plant
P. O. Box 927
'Phone—6194

CHARLOTTE
(Branch Plant)
Clifton Watson
Manager Southern Sales
P. O. Box 2036
Phone—3-7503

NEW YORK
W. S. Taylor
52 Vanderbilt Ave.
'Phone—Lexington 2-6060

ATLANTA
Arthur Harris
P. O. Box 1982
'Phone—Main 2543

CHICAGO
Albert R. Breen
80 E. Jackson Blvd.
'Phone—Harrison 7140

DALLAS
R. D. Hughes Sales Co.
1812 Main St.
'Phone—C-6283; C-6284

EMMONS WEAVE ROOM EQUIPMENT

Its 2-Way Action
Brings 20-Way Benefit To Your Goods
NOPCO FUA REVOLUTIONARY *Self-Fulling* *Self-Scouring* WOOL OIL!

BENEFIT 1.
100% FATTY—CONTAINS NO MINERAL OIL

Benefit 2. **Nopco FUA is non-oxidizable.**

BENEFIT 3. SPEEDS UP CARDING

Benefit 4. **Nopco FUA won't gum up the cards. There is considerably less "loading up" on the clothing, which results in an appreciable saving in stripping time.** ***Benefit 5.*** **It has anti-static properties that cut down fly in carding and produce a rounder, loftier roving. Being a fatty product, Nopco FUA penetrates and nourishes the leather rub rolls and condenser tapes, leaving them soft and preserving the natural life and cushion of the leather.**

BENEFIT 6. IMPROVES YARN PRODUCTION.

Benefit 7. **With Nopco FUA, the original loft and resiliency of wool fibers is maintained.** ***Benefit 8.*** **It prevents "bearding," a common cause of fiber weakening.** ***Benefit 9.*** **It helps increase yarn's tensile strength.** ***Benefit 10.*** **It will not become set in the yarns during steaming nor in the goods after steaming and crabbing.**

BENEFIT 11. FULLS AND SCOURS
WITHOUT SOAPS OR DETERGENTS

Benefit 12. **Nopco FUA acts like an oil on the fibers and like a soap in the wet finishing operation.**

Benefit 13. **The 3% Nopco FUA and water solution *originally* added to the stock gives "hard-to-believe" fulling and scouring results, *without the addition of soap or detergents.*** **Some mills have found even lower percentages of Nopco FUA highly effective.** ***Benefit 14.*** **Nopco FUA leaves the stuffing box and folds in the same manner as when soap or detergents are used.** ***Benefit 15.*** **It makes for appreciable saving in rinsing time.**

OTHER ADVANTAGES OF THIS NOVEL
TEXTILE LUBRICANT

Benefit 16. **Nopco FUA is more compatible with fugitive tints than any similar product.** ***Benefit 17.*** **Nopco FUA aids level piece dyeing.** ***Benefit 18.*** **It eliminates need of excessive alkali.** ***Benefit 19.*** **It gives extremely low ether extraction.** ***Benefit 20.*** **It helps remove pitch or tar easily. Nopco FUA makes all of these 20 benefits possible, at no material increase in cost!**

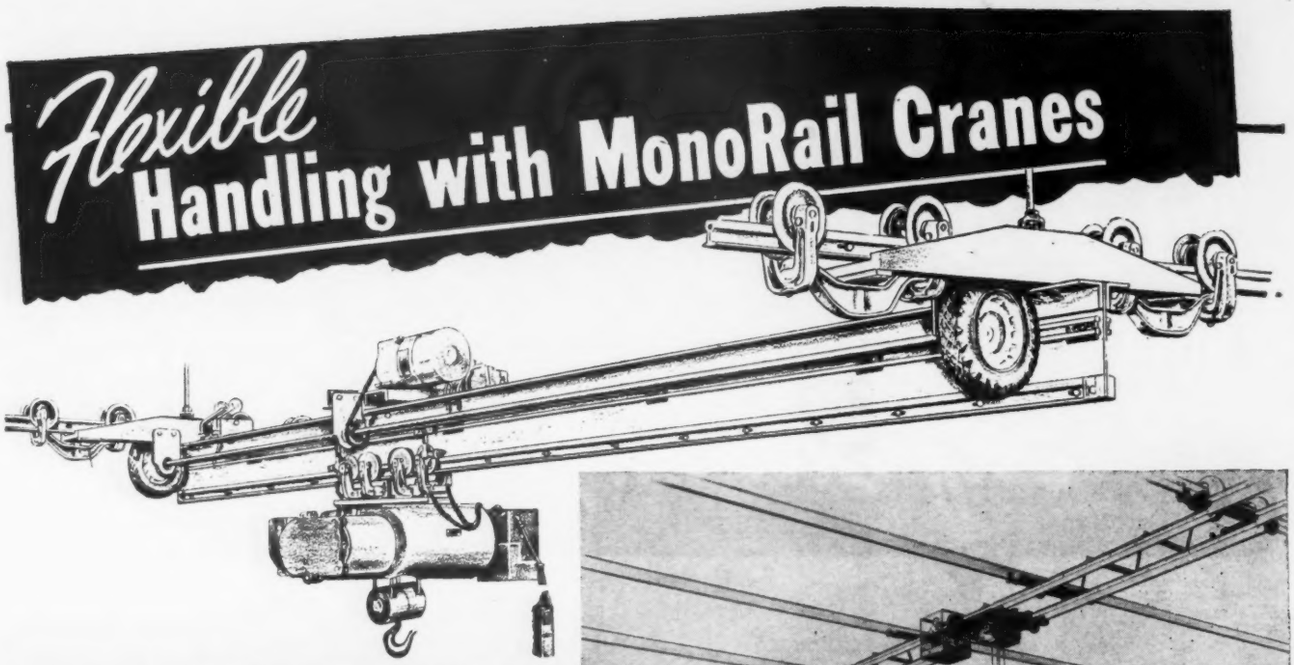
Actual production shows that Nopco FUA is the most outstanding self-fulling and self-scouring oil yet developed. For better wool processing, write for fully informative Nopco Data Bulletin.

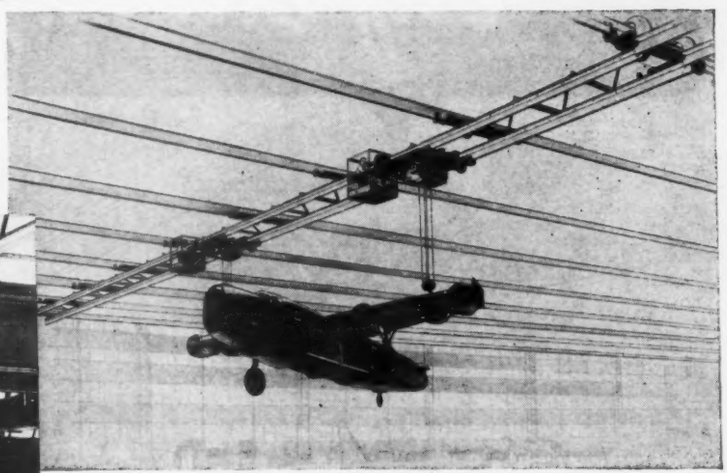
NATIONAL OIL PRODUCTS COMPANY
BOSTON • HARRISON, N. J. • CHICAGO
CEDARTOWN, GA. • RICHMOND, CALIF.

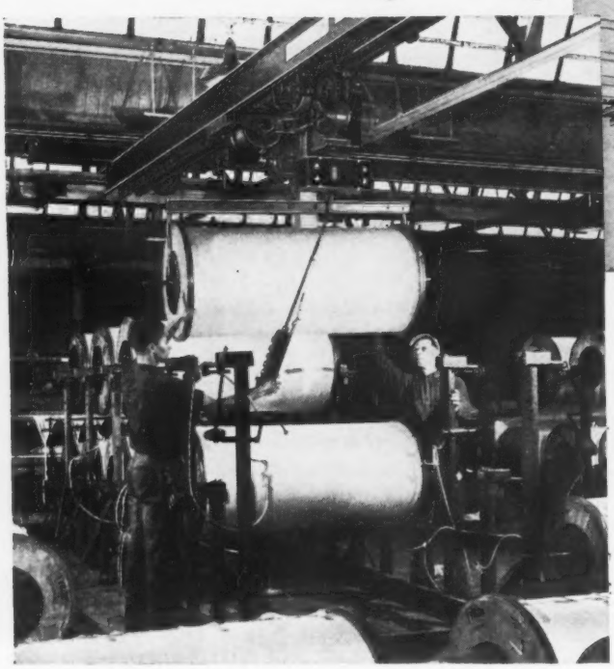
NOPCO FUA
SELF-FULLING
SELF-SCOURING
WOOL OIL

NOPCO
EVOLVED THROUGH RESEARCH

Flexible Handling with MonoRail Cranes



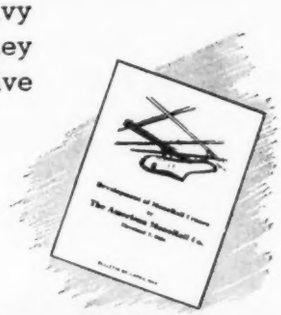




American MonoRail Cranes are not limited to bridging a single span. With their special interlocking and twin bridge designs, they supply over-all coverage . . . your handling is not tied down to alleyways or spotting or unloading near permanent equipment.

American MonoRail Cranes are available for any type of job — heavy or light duty — full automatic, cab controlled or hand operated. They can be installed under present operating conditions without excessive structural changes.

GET A COPY OF THIS BOOKLET! It tells the complete story of monorail crane development. Learn how cranes have been adapted to all kinds of handling operations. Ask for Bulletin MF-1.



THE AMERICAN MONORAIL COMPANY

13108 ATHENS AVENUE — CLEVELAND 7, OHIO

"LOOK, BETTY... *what a bright color!*"

Betty: "I'll say it is . . . (to clerk) Miss Fuller, is it my imagination, or do these colors really get brighter and prettier every year?

Clerk: "I don't think it's your imagination, Betty. The salesmen tell us the mills are using newer methods and getting new equipment all the time. They say the dyes stay brighter and more uniform nowadays . . ."

★ ★ ★

Yes, colors in many textile mills *are* brighter, truer and more uniform these days than ever before. Stainless steel equipment is one important reason.

With ARMCO Stainless Steels in your bleaching and dyeing equipment, delicate colors stay true. Dye solutions and bleaches last longer, retain full strength. These rustless steels help eliminate costly stains too. Tints won't "carry over"—and a quick rinse replaces time-consuming boil-outs.

But customer-satisfaction is not the only advantage of using ARMCO Stainless Steels. They save time and money in all wet-processing work. Production goes up. Maintenance costs go down. And equipment lasts much longer.

There is a grade of ARMCO Stainless for every application. Just get in touch with your equipment fabricator. The American Rolling Mill Company, 2721 Curtis Street, Middletown, Ohio.

STAINLESS ARMCO STEEL

THE AMERICAN ROLLING MILL COMPANY

ANOTHER DAN RIVER RESEARCH PROCESS

CONTINUOUS DYEING OF TEXTILE MATERIALS

United States Patent No. 2,396,908
(Also known as Continuous Pigment Vat Dyeing)
Issued March 19, 1946

To Glenn F. Womble, Assignor to Riverside & Dan River Cotton Mills, Inc., Danville, Va., a Corporation of Virginia

THE INVENTION AND ITS OBJECT

Owing to the fact that the U. S. Patent Office supply of copies of this patent paper are temporarily exhausted, we quote here, in part, from the text of the patent:

"This invention relates to the process of continuous dyeing of textile materials with vat dyestuffs.

"The object of the invention is to provide a rapid economical and continuous method of vat dyeing, obtaining results comparable in depth of shade, fastness properties and appearance, to the products of the old and well known pigment-pad method, a two step process commonly used in the practice of dyeing vat colors of medium and heavy shades.

"Dyeing with 'vat' dyestuffs is accomplished by reducing them chemically by a suitable reducing agent such as sodium hydrosulphite, to the leuco condition and dissolving them by means of a suitable alkali such as sodium hydroxide (commonly known as caustic soda). In this condition they are taken up by the affinity of the various fibers constituting the material, rinsed with water and subsequently oxidized by the oxygen of the air, or chemical oxidizing agents such as sodium perborate, sodium bichromate and acetic acid, hydrogen peroxide, and numerous others; rinsed again and usually soaped to remove any loose particles of dyestuff, to develop the shade, and increase the fastness properties and given a final rinsing with water to remove the soap.

THE RESULTS FROM THE INVENTION

1. "The ability to reduce (or dissolve) the dye simultaneously and continuously at rates of speed comparable to the usual methods for dyeing light shades.

2. "Production of medium and heavy shades having a smooth appearance free from the usual disagreeable heavy dyed neps and irregular surface deposits which are usually present as a result of trying to dye same shades by the usual reduced pad continuous dyeing methods. This process is especially adapted to the use on heavy and closely woven goods such as 'Windbreaker' poplins and heavy twills of the types used for army wear, allowing unusual speeds of one hundred yards or more per minute.

3. "Ability to obtain fastness properties comparable to the slow and expensive pad-jig dyed fabrics."

APPLICATION OF THE INVENTION

Textile materials to which this invention is applicable are defined in the patent papers as follows:

"Throughout this application all the processes are described as applied to conventional piece goods of standard width. However, this invention is applicable to narrow width goods and also single yarns and cords. Therefore, the word 'fabric' or 'textile' as used in this application is defined as including not only wide and narrow fabrics, but also single yarns and cords."

CLAIMS OF THE INVENTOR

Six claims are set forth in the patent papers of which the following claim, No. 2, is cited by way of example:

2. "Those steps in the method of solid color dyeing of one continuous piece of textile material in one operation with vat dyestuffs, which comprise applying to the textile a fluid, unthickened, water dispersion of pigment, squeezing and drying by heating to remove a substantial portion of the water from the textile during movement of the textile without disturbing the pigment on the textile, immediately subjecting the dried and heated textile for a relatively short period of time to an alkaline reducing bath maintained at substantially constant and relatively high concentration, and then subjecting the continuous length of textile to a squeezing action after such reducing bath to obtain thorough penetration of said reducing agent and contact with the pigments in the heated fabric."

STATUS OF THE INVENTION DURING THE WAR PERIOD

The owners of this patent, Riverside & Dan River Cotton Mills, Inc., realizing that this process was essential to the production of Army goods during the war period and that restrictions on its use generally by the industry would tend to bring about a critical shortage of Army goods of the required deep shades, made no effort to maintain its exclusive rights to this process during the period of hostilities, and for six months after the cessation of hostilities.

This was in full conformity with the spirit and the letter of a contract entered into by Riverside & Dan River Cotton Mills, Inc. with the United States Government, whereby patent owners "to further the prosecution of the war, aid in national defense and promote the common welfare," granted "releases and royalty-free licenses to the Government to practice the inventions secured by their patents and applications for patents."

By its terms this contract terminated "on the date six months after the cessation of hostilities in all wars in which the United States is now engaged." Accordingly this contract with the Government expired as of March 2, 1946.

LICENSING AGREEMENTS

Upon expiration of this contract, Riverside & Dan River Cotton Mills, Inc. proceeded forthwith to make available to the industry Licensing Agreements under the terms of which Licensees will be enabled to enjoy all the benefits of this invention equally with Riverside & Dan River Cotton Mills, Inc., owner of the patent covering this exclusive process.

Information as to these licensing agreements may be obtained from

Research Engineering Division

RIVERSIDE & DAN RIVER COTTON MILLS, INC.

DANVILLE, VIRGINIA

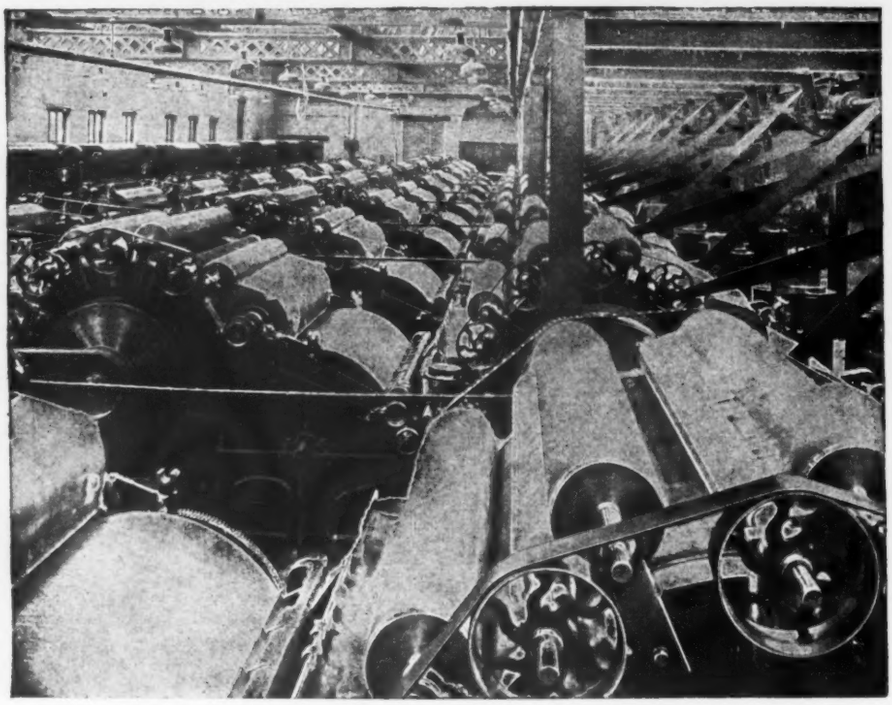
LAWRENCE CALFSKINS

. . . the brand quality mills select

Cannon Mills, Inc. is among the many top-ranking mills using Lawrence Calfskins for spinning frame aprons in order to make certain of the best spinning results. . . . More mills specify Lawrence Calfskins than any other type. They realize, first, that calfskin has a *natural* surface that is perfect for drafting . . . and, second, that Lawrence facilities for product research, manufacture and inspection assure uniform high quality. . . . Specify Lawrence Calfskins for your aprons and take advantage of the better performance and longer top-quality life that have characterized the Lawrence brand for many years. . . . A. C. Lawrence Leather Company, Peabody, Mass., manufacturers of Lawrence Spinna Calf for roll coverings. Represented by H. H. Hersey, Greenville, S. C.

EVERY YEAR MORE PEOPLE DECIDE LEATHER IS BEST

PLATT'S
WORSTED CARDING ENGINES



Panoramic view of a layout showing Worsted Carding Engines in operation.

Machines constructed in the greatest variety suitable for all types of Wools.

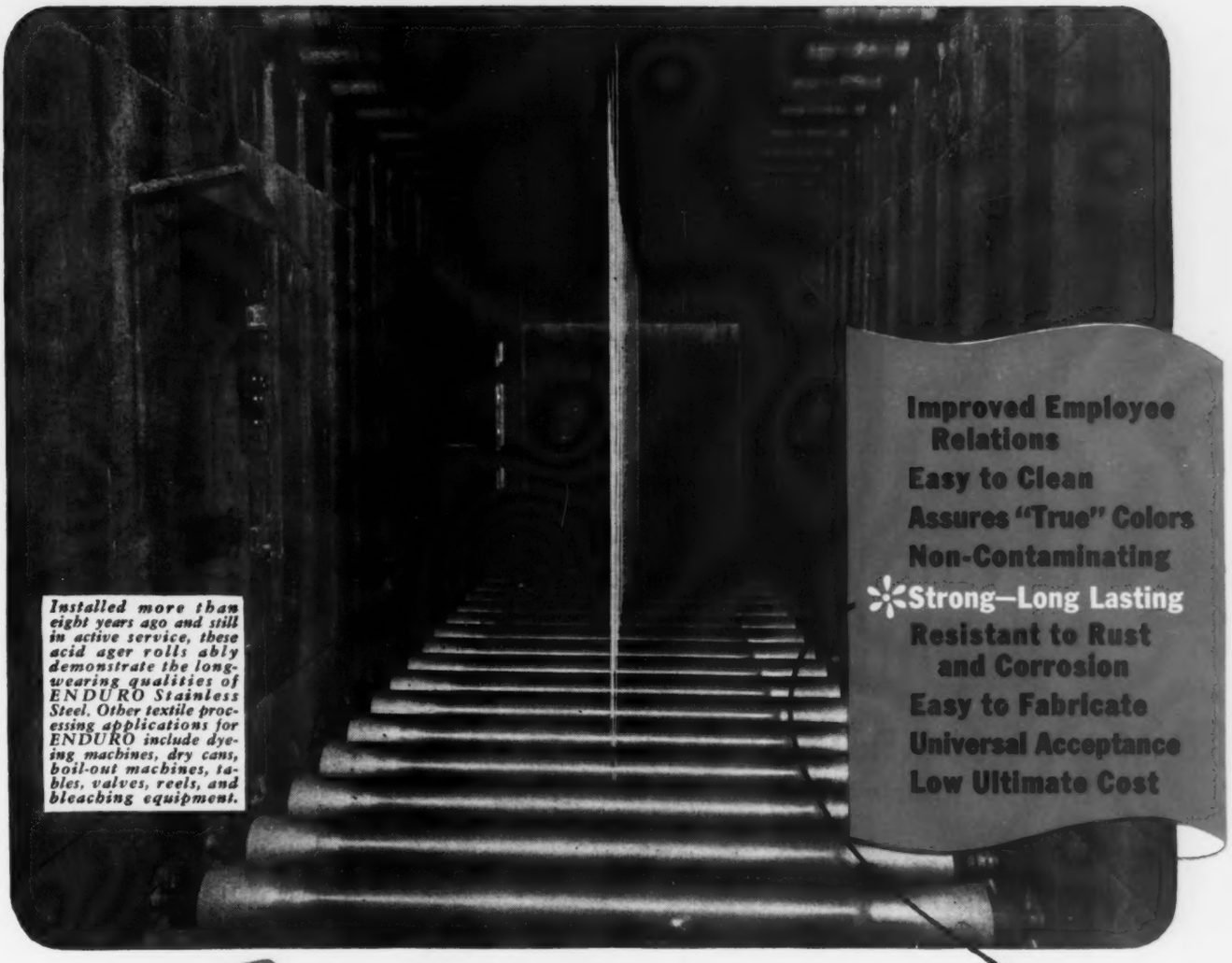
- ***RIGID CONSTRUCTION***
- ***EASE OF ADJUSTMENT***
- ***MAXIMUM PRODUCTION***

PRINCE-SMITH & STELLS LTD

WORSTED MACHINERY MANUFACTURERS

KEIGHLEY YORKSHIRE ENGLAND

***ALL ENQUIRIES:*—ATKINSON HASERICK & CO, 211 CONGRESS STREET, BOSTON 6, MASS.**



Installed more than eight years ago and still in active service, these acid ager rolls ably demonstrate the long-wearing qualities of ENDURO Stainless Steel. Other textile processing applications for ENDURO include dyeing machines, dry cans, boil-out machines, tables, valves, reels, and bleaching equipment.

Enduro Pays in many ways

High strength and long life are two highly important qualities of Republic ENDURO Stainless Steel which pay profitable long-term dividends in many different types of textile processing equipment.

Why? Because lustrous ENDURO ranks among the toughest, strongest of all metals. It does not rust or corrode . . . and, because it is solid stainless steel throughout, its smooth, hard surface lasts indefinitely.

Hundreds of ten- and fifteen-year-old installations, in which ENDURO equipment still looks like new, afford convincing proof of the long, trouble-free service which ENDURO provides.

For more detailed information on these and the many other reasons why it pays to specify Republic ENDURO Stainless Steel in your equipment, write to:

REPUBLIC STEEL CORPORATION

Alloy Steel Division • Massillon, Ohio

GENERAL OFFICES • CLEVELAND 1, OHIO

Export Department: Chrysler Building, New York 17, N. Y.

Republic

ENDURO STAINLESS STEEL

Reg. U. S. Pat. Off.

Other Republic Products include Carbon and Alloy Steels—Pipe, Sheets, Strip, Plates, Bars, Wire, Pig Iron, Bolts and Nuts, Tubing

WON'T WORK LOOSE!

DIGS IN

Reg. U. S. Pat. Off.

UNBRAKO

SELF-LOCKING SOCKET SET SCREWS
With the Knurled Point

Pat'd. & Pats. Pend.

Cut your worries and your maintenance costs to a minimum when these screws are in use throughout the mill! The "Unbrako" Socket Set Screw with Knurled Point is a *Self-Locker*, because the knurled point digs in and holds firm—against even the most stubborn vibration! It can't back out. In sizes from No. 4 to 1½" in diameter; full range of lengths.

Why not write today for more information? Send for the *free* "Unbrako" Catalog. **And remember — "Unbrako" and "Hallowell" products are sold entirely through distributors.**

THE "UNBRAKO" WELT-BAR SCREW

. . . uniformly strong and accurate—already performing satisfactorily in many mills.

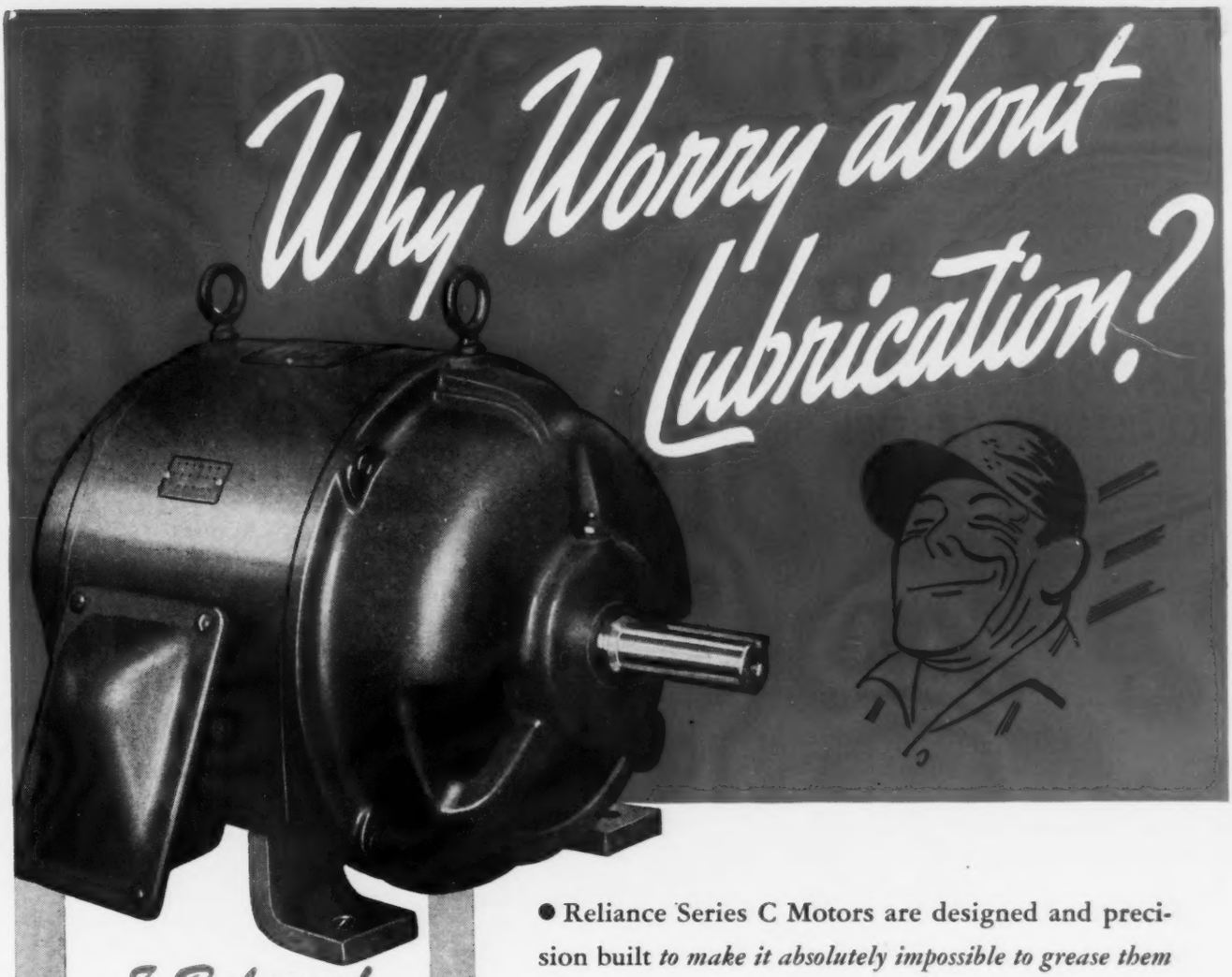
Knurling of Socket Screws originated with "Unbrako" in 1934.

OVER 43 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.

JENKINTOWN, PENNA., BOX 571 • BRANCHES: BOSTON • CHICAGO • DETROIT • INDIANAPOLIS • ST. LOUIS • SAN FRANCISCO

Why Worry about Lubrication?



8 Balanced Design Features

OF RELIANCE SERIES C MOTORS

1. **Protecting enclosures** keep out dirt, chips, oil, excess moisture.
2. **Steel stators for strength.**
3. **Thirteen-step winding treatment,** for maximum stator protection.
4. **Pressure cast aluminum rotors** provide trouble-free windings.
5. **Heavy shafts,** liberally designed for added strength.
6. **Improved bearing lubrication** affords *real* protection to bearings and windings.
7. **Optional lead outlet arrangement** permits machine mounting with elimination of conduit box.
8. **Flange and face type brackets** offer alternative methods of machine application.

● Reliance Series C Motors are designed and precision built *to make it absolutely impossible to grease them wrong.* On the vast majority of applications, these factory lubricated motors continue to operate *for years* with no additional lubrication whatsoever. In cases where unusual conditions make occasional attention necessary—or if it is your practice to lubricate at regular intervals—undergreasing or overgreasing make no difference. Write for Bulletin C-118 which tells the whole story—and specify Reliance Series C Motors to forget lubrication worries.

RELIANCE ELECTRIC & ENGINEERING CO.

1086 Ivanhoe Road **Cleveland 10, Ohio**

Birmingham • Boston • Buffalo • Chicago • Cincinnati • Detroit • Greenville • Houston • Kalamazoo
Knoxville • Los Angeles • Minneapolis • New Orleans • New York • Philadelphia • Pittsburgh
Portland, Ore. • Rockford, Ill. • St. Louis • San Francisco • Seattle • Syracuse • Washington, D.C.

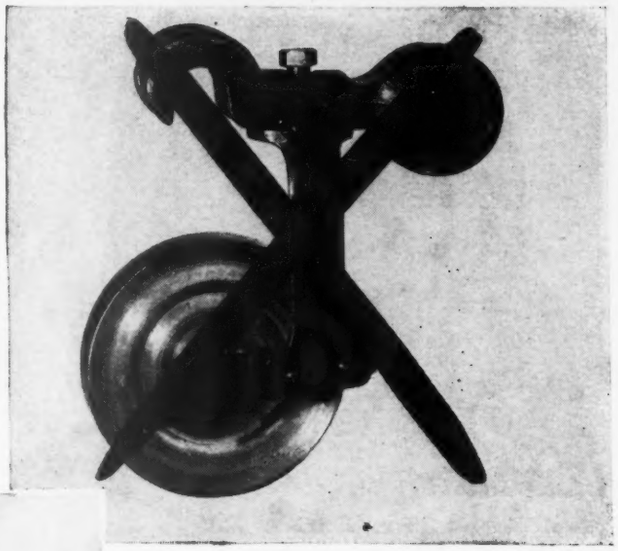
RELIANCE AC DC MOTORS

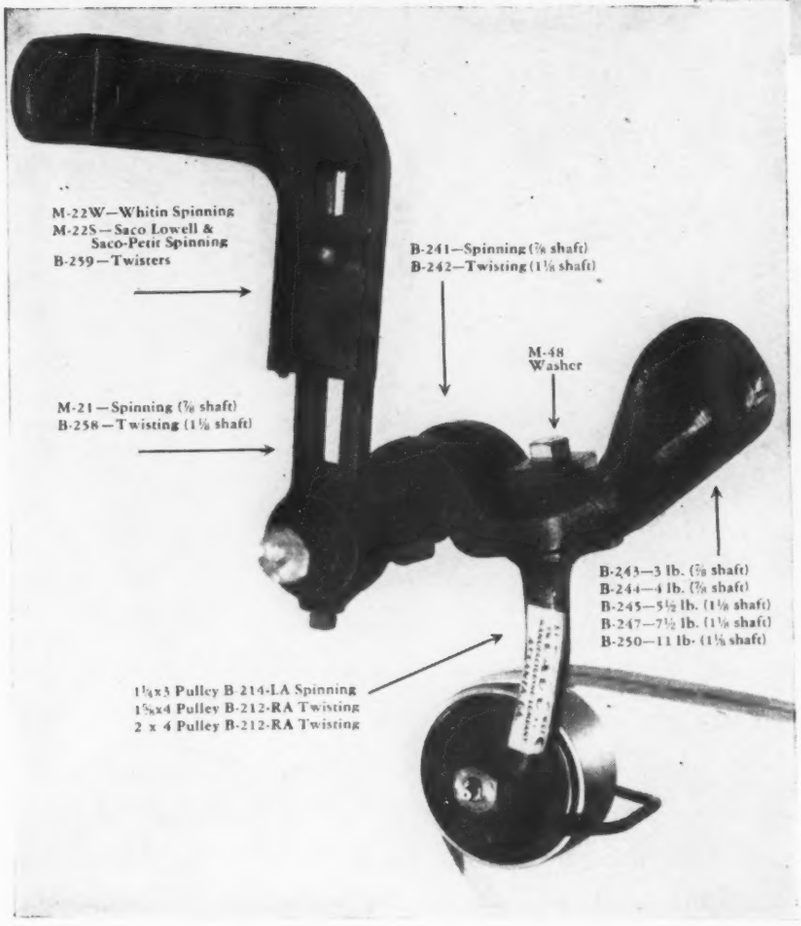
STOP THESE!

- *Stuck bearings on starting;*
- *Frequent readjustment;*
- *Frayed selvage on tapes;*
- *Higher power consumption;*
- *High cleaning cost;*
- *Unequal wear of wood bearings;*
- *Cut cylinders from off tapes;*
- *Tapes jump off when started;*
- *Risk of fire from jumped tapes;*

. . . by replacing your wood bearings and tin tension pulleys with

MEADOWS PRECISION BALL-BEARING TENSION PULLEYS





Many mills pay for them with labor and power savings, and increased production in one year's time.

- **More uniform spindle speeds**
- **Maintain permanent adjustment**
- **No stuck bearings**
- **Lubricate only twice a year (every 5000 hours)**
- **Eliminate tape jump-off due to stuck or worn bearings**

Different pulley sizes, brackets and weights to handle any frame from lightest spinning to heaviest cable twisting.

Our representatives will check your frames with Stroboscope and tension scales and make proper recommendation.

Also Four-Spindle Drive Band Tension Pulleys, Bands, Ball-Bearing Cylinder Units, Meadows Superior Saddles, Separator Shields, Worsted Roving Pulleys, Band-to-Tape Drive Conversions.

Representatives

JAMES P. COLEMAN,
P. O. Box 1351, Greenville, S. C.

WALTER S. COLEMAN,
P.O. Box 722, Salisbury, N. C.

MATTHEWS EQUIPMENT CO.,
93-A Broadway, Providence, R. I.

MEADOWS MANUFACTURING CO. · ATLANTA, GA.

SPERM OIL
FROM SELECTED SOURCES

From Source Through Sulphonation ...Cyanamid Controls the Quality

Whether you use sulphonated oils in drum or carload lots it is important that they be consistently uniform and reliable from shipment to shipment, since even slight variations may affect the quality of your fabrics. Cyanamid assures reliability by carefully controlling the sources of raw materials and the methods of production. For example, our sources of supply for sperm oil are among the finest, and each lot must meet specific standards before it is used. Moreover, Cyanamid's sulphonating processes are controlled with exacting precision through the use of advanced, large scale facilities in which quality is constantly checked and rechecked. As a result, Cyanamid is prepared to meet both large and small demands with equal satisfaction. The use of the listed oils is backed by Cyanamid research plus the cooperation of its laboratory and field staffs.

Olive Oil	Rape Seed Oil	Peanut Oil
Tea Seed Oil	Sperm Oil	Corn Oil
Cocoanut Oil	Castor Oil	Cottonseed Oil
Babassu Oil	Red Oil	Soya Bean Oil

AMONG CYANAMID PRODUCTS FOR THE TEXTILE INDUSTRY *are:*

Penetrants • Softeners • Finishes • Sizing Compounds DECERESOL* OT Wetting Agents • PARAMUL** 115 Water Repellent and other specialties and Heavy Chemicals.

*Reg. U. S. Pat. Off. **Trade-mark

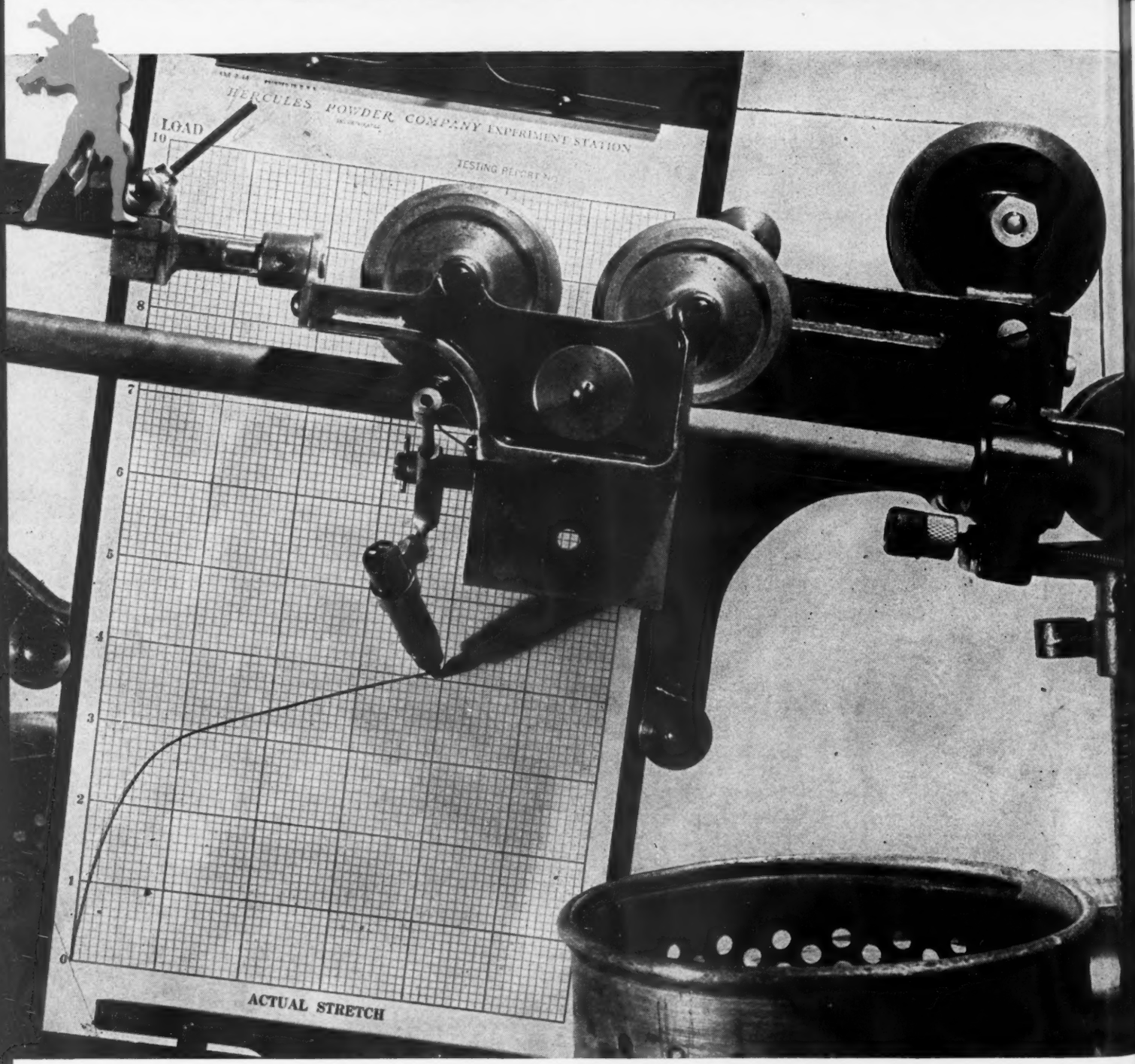
A control laboratory at a Cyanamid plant manufacturing chemicals for the Textile Industry—an assurance of uniform, high quality products on which you can rely in your operations.

American Cyanamid & Chemical Corporation

A UNIT OF AMERICAN CYANAMID COMPANY

30 ROCKEFELLER PLAZA • NEW YORK 20, N. Y.

HERCULES RESEARCH



Testing strength of rayon at the Hercules Experiment Station Laboratory

IT PAYS TO KNOW *MORE* ABOUT

HERCULES

HELPS FROM RUGS TO RIBBONS

Hercules research has developed chemical materials that are used increasingly in the manufacture of every type of textile product—ranging from the sheerest dresses to the thickest carpeting.

For example, many varieties of thick or heavy-pile textile products can be made to wear longer, because of Hercules research in processing and finishing materials. Flexalyn*, for instance, is used as a binder for corn and other starches for back-sizing carpets. It provides mixes that have increased flexibility and body and are less sensitive to moisture and deterioration on aging.

Constant research has improved the quality of Hercules Cellulose Acetate to the point where it is now available in all useful ranges of acetyl contents and viscosities, thus meeting every need in the manufacture of acetate rayons. Research has also improved Hercules Chemical Cotton, so that today it makes possible the sheerest fabrics as well as tougher high-tenacity viscose rayon for industrial uses.

For details on Hercules chemical materials for the textile industry, or for information on how Hercules can complement your research, mail the coupon at right.

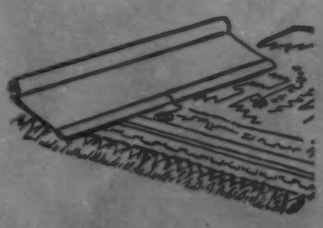
*Reg. U. S. Pat. Off. by Hercules Powder Company

CHEMICAL MATERIALS FOR THE TEXTILE INDUSTRY

Hercules chemical materials for the textile industry include:

B-3 Reagent...
Used as a delustering agent in the processing of rayon, both in manufacturing and finishing operations.

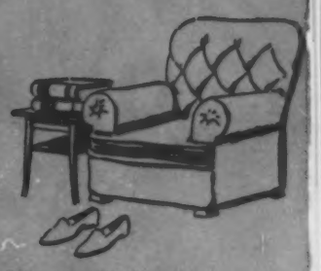
Clorafin*...
Hercules low-cost chlorinated paraffin for flame- and water-resistant coatings for canvas and other textiles.



Flexalyn*...
An economical binder for corn and other starches for back-sizing carpets, tag cloth filling, window shades.

Pine Oil...
Yarmor* 302-W pine oil is a low-cost wetting agent and penetrant used in wet processing all textile fibers.

Terposol* 8...
One of a series of solvents and plasticizers for textile chemicals. An excellent dispersant for pigments.



Nitrocellulose...
Hercules nitrocellulose and ethyl cellulose are the basis for rapid drying, durable, brilliant textile coatings.

FOR FURTHER DETAILS

HERCULES POWDER COMPANY
INCORPORATED
994 Market Street, Wilmington 99, Delaware

Please send information on_____

_____

*Name*_____

*Title*_____

*Company*_____

*Street*_____

*City*_____ *Zone*_____ *State*_____

More Trouble-free Spinning per Package

THERE'S more in a box of Victor Travelers than just metal formed and tempered to your needs.

True, you get more skillful design, more carefully selected metals, more precisely controlled heat-treatment, a more lustrous, glass-smooth finish. But most important, you get *more* of what you actually want when you order travelers—*more* trouble-free spinning or twisting.

By reducing end breakage, by running longer between changes, by permitting higher spindle speeds, Victor Travelers keep your frames *producing*—more top-quality yarn per frame per day.

That's why mill-men throughout the industry — who know the importance of the *right* traveler — have chosen Victor Travelers for over 8,000,000 spindles of spinning and twisting — ample proof that Victors pay off in performance.

A Victor Service Engineer will help you choose the Victor Traveler that will deliver the *most* trouble-free spinning per box on your frames. Write, wire, or phone for prompt service.

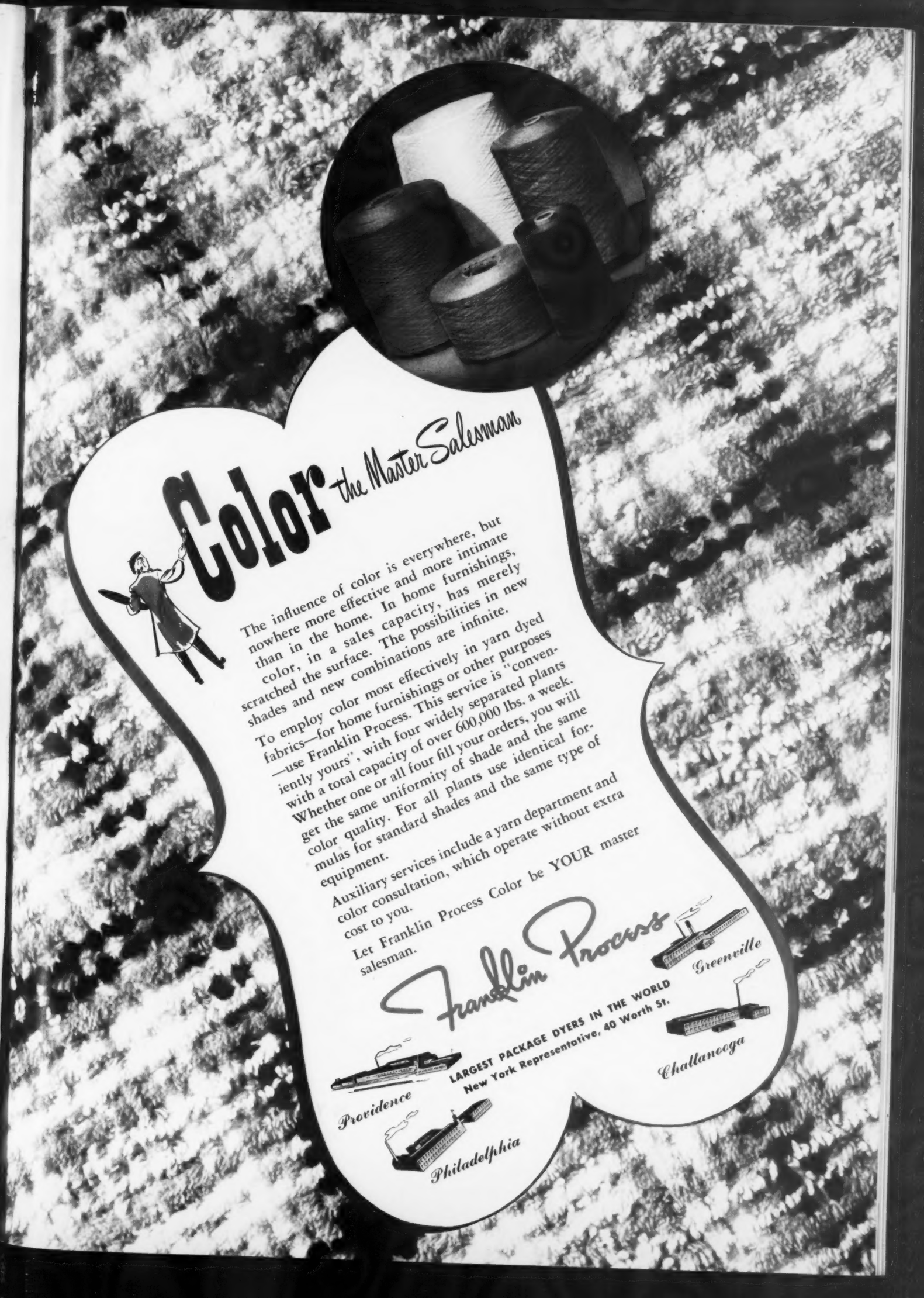
VICTOR Ring Travelers

VICTOR RING TRAVELER COMPANY

PROVIDENCE, R. I. . . . . 20 Mathewson St. . . . . Tel. Dexter 0737

GASTONIA, N. C. . . . . 173 W. Franklin Ave. . . . . Tel. 247

City_____ Zone_____ State_____



Color the Master Salesman

The influence of color is everywhere, but nowhere more effective and more intimate than in the home. In home furnishings, color, in a sales capacity, has merely scratched the surface. The possibilities in new shades and new combinations are infinite.

To employ color most effectively in yarn dyed fabrics—for home furnishings or other purposes—use Franklin Process. This service is "conveniently yours", with four widely separated plants with a total capacity of over 600,000 lbs. a week. Whether one or all four fill your orders, you will get the same uniformity of shade and the same color quality. For all plants use identical formulas for standard shades and the same type of equipment.

Auxiliary services include a yarn department and color consultation, which operate without extra cost to you.

Let Franklin Process Color be YOUR master salesman.

Franklin Process

LARGEST PACKAGE DYERS IN THE WORLD
New York Representative, 40 Worth St.

Greenville

Chattanooga

Providence

Philadelphia

BE READY FOR "CUTTING ACTION"

When Winding Wool and Worsted Yarns

THE "CUTTING ACTION" of wool and worsted yarns, particularly of hard twist worsted yarns, is something to reckon with in the winding department. Unless machinery parts are made expressly to cope with it, maintenance costs will be prohibitive.

Cutting action is not a serious problem with the Foster Model 102, for all parts contacting the yarn, including traverse guides, are made of hardened metals, specially selected for the purpose.

Replacements are required only at infrequent intervals and represent a relatively minor expense. The cost runs as low as $3.50 per 100 spindles per year in some cases. Furthermore highly paid mechanics are not required to make repairs or adjustments.

Low maintenance and repair costs are only one part of the Foster Model 102 story. Consider also these FLEXIBILITY FEATURES:—

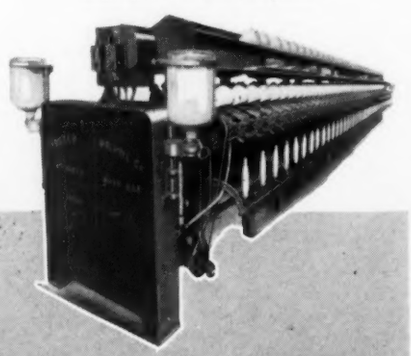
1. Will wind any kind and any count of yarn from fine-combed cotton or spun rayon for tropical fabrics to heavy wool yarns for arctic cloths.
2. Will wind a straight base cone for warping or a convex base cone for knitting with a simple adjustment.
3. Will produce 9 different angles of wind from 9° to 18°. Important if you radically change your count or type of yarn.
4. Will wind package dyed yarn, even if damp. No jumping out of guides.
5. Will wind emulsion treated yarn. In fact, it is frequently equipped with an emulsion attachment.
6. Changeovers from cones to tubes, or vice versa, are comparatively inexpensive.
7. One side can wind cones and the other tubes, if desired.

Bulletin A-91 on request

FOSTER MACHINE CO., Westfield, Mass.

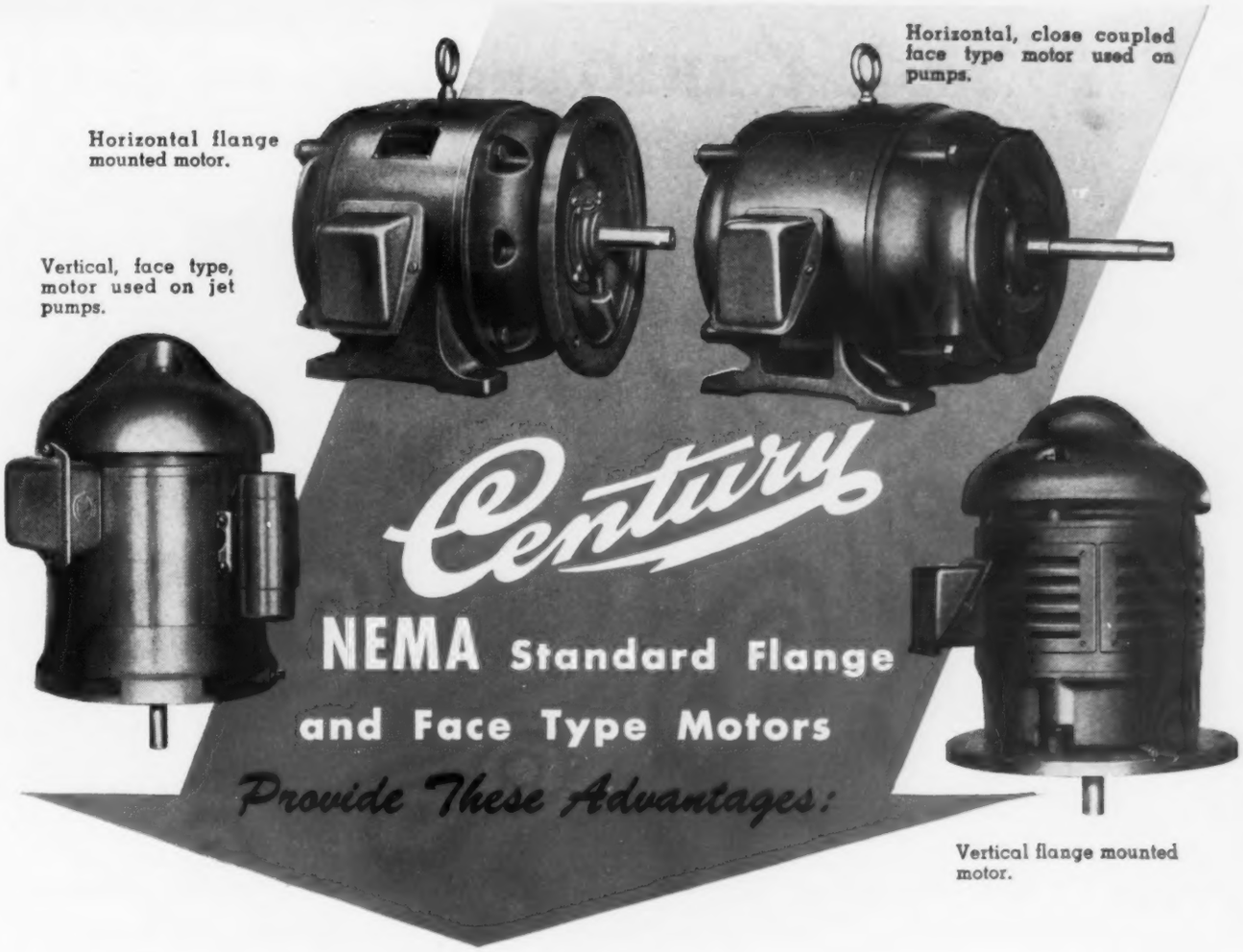
Southern Office—Johnston Bldg., Charlotte, N. C.

Canadian Representative—Ross-Whitehead & Co., Ltd., University Tower Bldg., 660 Ste. Catherine St., West, Montreal, Quebec



FOSTER MODEL 102

FOR WINDING COTTON • WOOL • WORSTED • MERINO • MERCERIZED • SPUN SILK AND SPUN RAYON YARNS


Horizontal, close coupled face type motor used on pumps.
Horizontal flange mounted motor.
Vertical, face type, motor used on jet pumps.
Century
NEMA Standard Flange and Face Type Motors
Provide These Advantages:
Vertical flange mounted motor.

- **Interchangeability**
- **Simplified Service Problems**
- **Comparatively Better Shipments**

Many designers are taking advantage of the benefits of motor standardization, especially motors for flange and face type motor mountings.

Century motors with standard face type brackets are used where the motor is fastened from the driven machine side and the flange type bracket is used where the motor is fastened to the machine from the motor side.

Flange and face type Century motors are supplied in single phase, three phase and direct current types, for vertical or horizontal mounting.

Other Century motors are made in a wide range of types and sizes from 1/20 to 600 horsepower. To assure top performance Century motors are engineered to the functional characteristics of the machines they drive. Select Century motors for all your electrically powered equipment.

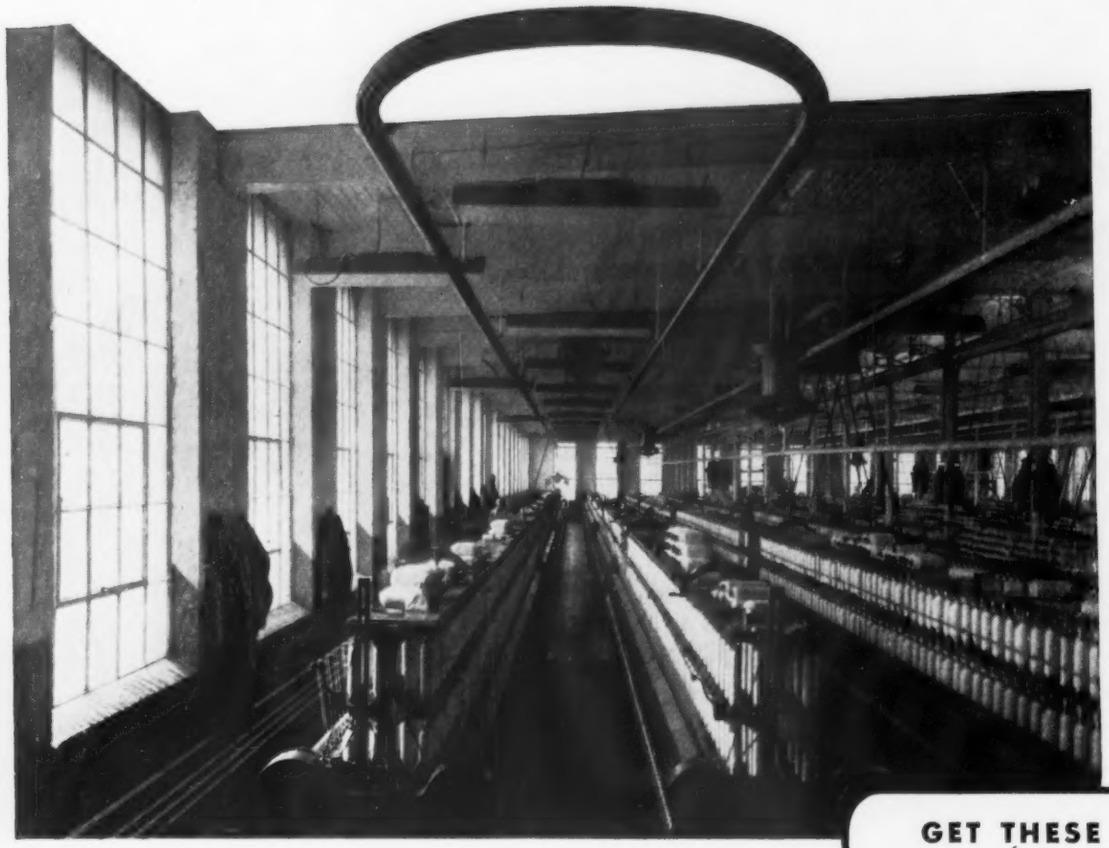
Century C MOTORS

463

CENTURY ELECTRIC COMPANY, 1806 Pine Street, St. Louis 3, Missouri

Offices and Stock Points in Principal Cities

Put in *Frosted* AKLO and keep out glare!



Note the detail in this textile mill photo—*with camera pointed into the light.*

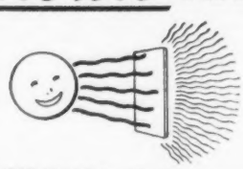
Excessive sun glare and heat often are potent enemies to efficient production in textile mills. But *Frosted* AKLO Glass, manufactured by the Blue Ridge Glass Corporation of Kingsport, Tennessee, resists solar heat and materially reduces sun glare.

Frosted AKLO'S reduction of sun glare results in less eyestrain and consequently less worker fatigue. It helps to increase safety... provides greater comfort for workers on the job. Such conservation of human energy means more efficient production.

Other *Frosted* AKLO economies include reduced load on air conditioning equipment and the elimination of window shades and curtains, or the painting of window glass. Improved plant appearance is a further advantage.

Frosted AKLO is a cool-appearing, blue-green glass. It is sold by Libbey·Owens·Ford through leading glass distributors. For an interesting demonstration of *Frosted* AKLO'S heat and glare reducing characteristics, ask your L·O·F distributor to demonstrate the Radiometer in your office. Or write Blue Ridge Sales Division, Libbey·Owens·Ford Glass Company, 9966 Nicholas Building, Toledo 3, Ohio.

GET THESE THREE ADVANTAGES OF *Frosted* AKLO



REDUCES GLARE—Eliminates eyestrain and employe fatigue.

RETARDS SUN HEAT—Keeps workers comfortable on their jobs.

RENDERS SAVINGS—Eliminates shades or painting of glass.

L·O·F

BLUE RIDGE AKLO GLASS

Heat-Absorbing · Glare-Reducing · Figured and Wire Glass

BLUE RIDGE GLASS CORP. MANUFACTURERS OF QUALITY GLASS KINGSPORT, TENN.

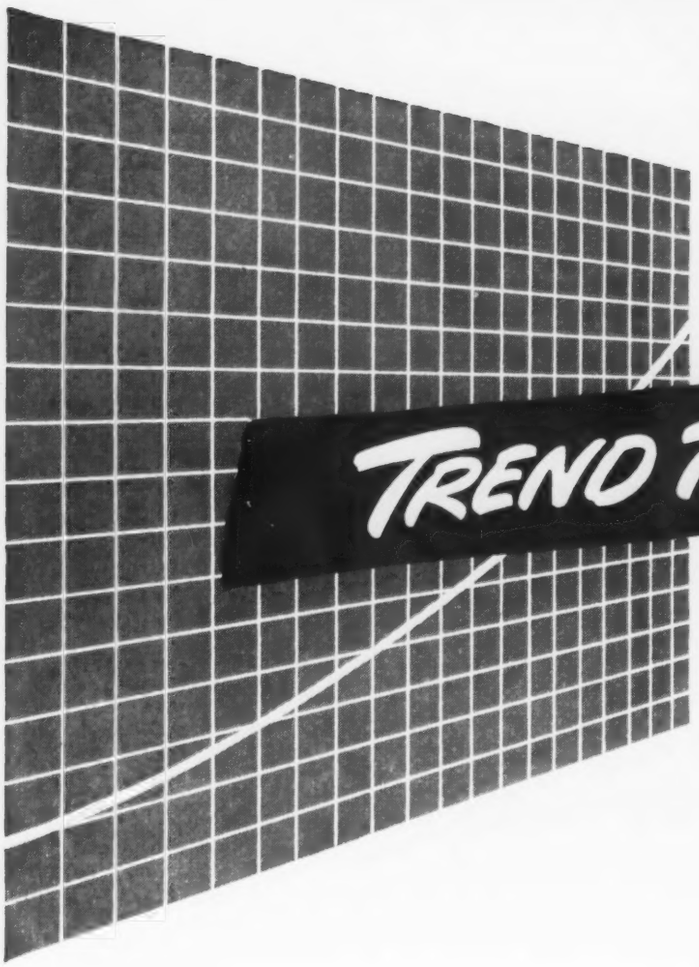
Every known requirement of leading industries, every proved scientific advance in pneumatic control, every advantage of unmatched research and experience, has guided the design of the new Foxboro Model 40 Stabilog Controller. The results are simpler and more rugged construction, easier and more stable adjustments, unequalled performance.

Foxboro 40

STABILOG* CONTROLLER

Write for complete explanation in Bulletin 381. The Foxboro Company, 84 Neponset Avenue, Foxboro, Mass., U.S.A.

* Reg. U. S. Pat. Off.



Why is the TREND TO GAS in the Textile Plant?

For years the gas utility industry of America has proudly featured the slogan "The Trend is to Gas" for all industrial heating. In the textile plants of America, too, the trend continues to Gas—for singeing, tenter-frame drying, calendering, warp-sizing.

A few of the reasons why Gas is preferred in the modern textile plant include: economy—reducing production and equipment costs; speed—the desired temperature can be attained quickly; complete and accurate controllability—no other source of heat in textile operations lends itself to such precise modulation so readily as does Gas.

Dependability—Gas is always there when you want it; cleanliness—Gas burns cleanly and Gas equipment can be kept clean with little effort; improved working conditions—men and women prefer Gas equipment because working conditions of a desirable nature are more readily attained.

The many advantages of Gas and modern Gas equipment as applied to textile operations can best be explained by the Industrial Engineer of your local Gas Company. A grand chap to know—a mighty profitable acquaintance.

AMERICAN GAS ASSOCIATION

420 LEXINGTON AVENUE, NEW YORK 17, N.Y.

THE TREND IS TO GAS

FOR ALL INDUSTRIAL HEATING

TEXTILE MILLS PREFER Condor QUALITY FOR STEADY PRODUCTION

This textile finishing range is equipped exclusively with Manhattan rubber products. Included are a 64" x 5" Condor Pull Roll; two Condor Squeeze Rolls 64" x 8"; five Condor Whipcord Endless Belts operating on severe reverse turns for which they are especially suited; two Condor Whipcord V-Belts.

MANHATTAN RUBBER LINING for Tanks, Pipe and Fittings

A special process of rubber lining has been developed that places Manhattan Acid-Proof Rubber Linings foremost in the field. Adhesion to metal has been attained so that mechanical separation cannot be effected. Compounded to undergo temperature changes without cracking or oxidizing. Affords your storage and handling equipment utmost protection from corrosion and insures solutions against contamination.

The term FLEXLASTICS is an exclusive Manhattan trade mark. Only Manhattan can make FLEXLASTICS.

Condor RUBBER COVERED ROLLS

Condor Rubber Covered Rolls do not oxidize, surface harden, crack or change density. Out of constant research has come Manhattan's FLEXLASTICS with better aging properties, with closely controlled and uniform densities in a wider range. You are assured long and profitable service. Each Condor Rubber Covered Roll is specifically designed for your requirements for batcher, scutcher, slasher, padder, mercerizing range and other textile equipment.

Condor PRODUCTS FOR THE TEXTILE INDUSTRY

TRANSMISSION BELTS	ACID HOSE	RUBBER LINED TANKS
V-BELTS	FIRE HOSE	LOOM STRAPPING
CONE BELTS	VACUUM HOSE	SAND ROLL COVERINGS
AIR, WATER AND STEAM HOSE	RUBBER COVERED ROLLS	OILLESS BEARINGS
		RUB APRONS

Roll covering plants at Passaic, N. J.; North Charleston, S. C.; Neenah, Wis.

RAYBESTOS-MANHATTAN, INC.

MANHATTAN RUBBER DIVISION

EXECUTIVE OFFICES AND FACTORIES — PASSAIC, NEW JERSEY

Left: Glass-asbestos combination yarn and cloth.
Right: Glass-cotton combination yarn and cloth.

MAKE A NEW KIND OF FABRIC!

...Twist or weave Fiberglas Yarn with other yarns...

Modern, colorful lampshades are being made of these new fabrics.

For welding curtains and fire screens, these fabrics provide lasting firesafety.

All kinds of electrical insulation materials are made of these combinations.

Floral and packaging ribbons prove stronger and decay-resistant.

Here's a new idea—one you can go to work on *today!*

Fiberglas yarn, twisted or woven with asbestos, cotton or synthetic yarn, gives new and important characteristics to fabrics! Fiberglas yarn, made from glass fibers, adds strength —reduces shrinking and stretching—provides resistance to fire, rot and decay in finished fabrics. Fiberglas yarn provides the characteristics that many yarns lack!

There's wide market interest in these new fabrics which blend the best properties of each type of yarn into a new exciting fabric. Such uses as radio grille cloth, floral, decorative and millinery ribbons and lampshade fabrics are already developed and are for sale by forward-looking weavers. A host of industrial uses open broad new market possibilities for these combination fabrics—electrical insulation, filtration and welding curtains are but a few.

Details on the types and sizes of Fiberglas yarn—how to use it with best results—how it blends with other yarns, are yours for the asking. Investigate it now. Owens-Corning Fiberglas Corporation, Dept. 864, Toledo 1, Ohio.

In Canada: Fiberglas Canada Ltd., Oshawa, Ontario

OWENS-CORNING
FIBERGLAS
TM. REG. U.S. PAT. OFF.

The *Only* Machine That Will Dye ONE, TWO, THREE or FOUR Beams or Yarn Carriers Under *Identical* Conditions!

Pressure . . . Flow . . . Liquor Ratio . . . are *Automatically Adjusted!*

For many years it was considered impossible to dye more than one beam or yarn carrier in the same dye bath, at the same time, because of the long liquor ratio that would be required. But the *Smith-Drum Clover Leaf Beam and Package Dyeing Machine* . . . introduced several years ago . . . made it possible and practical to dye as many as *four* beams or yarn carriers at once, in the same machine, with exactly the same liquor ratio as required to dye only one!

This results in absolutely uniform dyeing . . . because each beam or package carrier is dyed at the same temperature, pressure, flow and with the same additions of dyestuffs.

When less than a full load is to be dyed, pressure, flow and liquor ratio are automatically adjusted so that they remain the same as when dyeing a full load. Furthermore, pressure and flow can be varied at will by the operator, to allow for various sized beams.

This machine not only assures uniform dyeing results . . . but it also permits definite economies in operation. Send for complete information.

SMITH, DRUM & COMPANY
Allegheny Ave. at 5th Street — Phila. 33, Pa.

ARMY (E) NAVY
Four Times Winner of Army-Navy "E"

SMITH-DRUM PROCESSING MACHINERY

for hosiery dyeing, skein dyeing, package dyeing, beam dyeing, piece goods dyeing, package extracting, package drying, skein mercerizing, warp mercerizing, hosiery inspection.

THIS QUICKER BLEACH

Eliminates Re-Runs... and Saves Steam

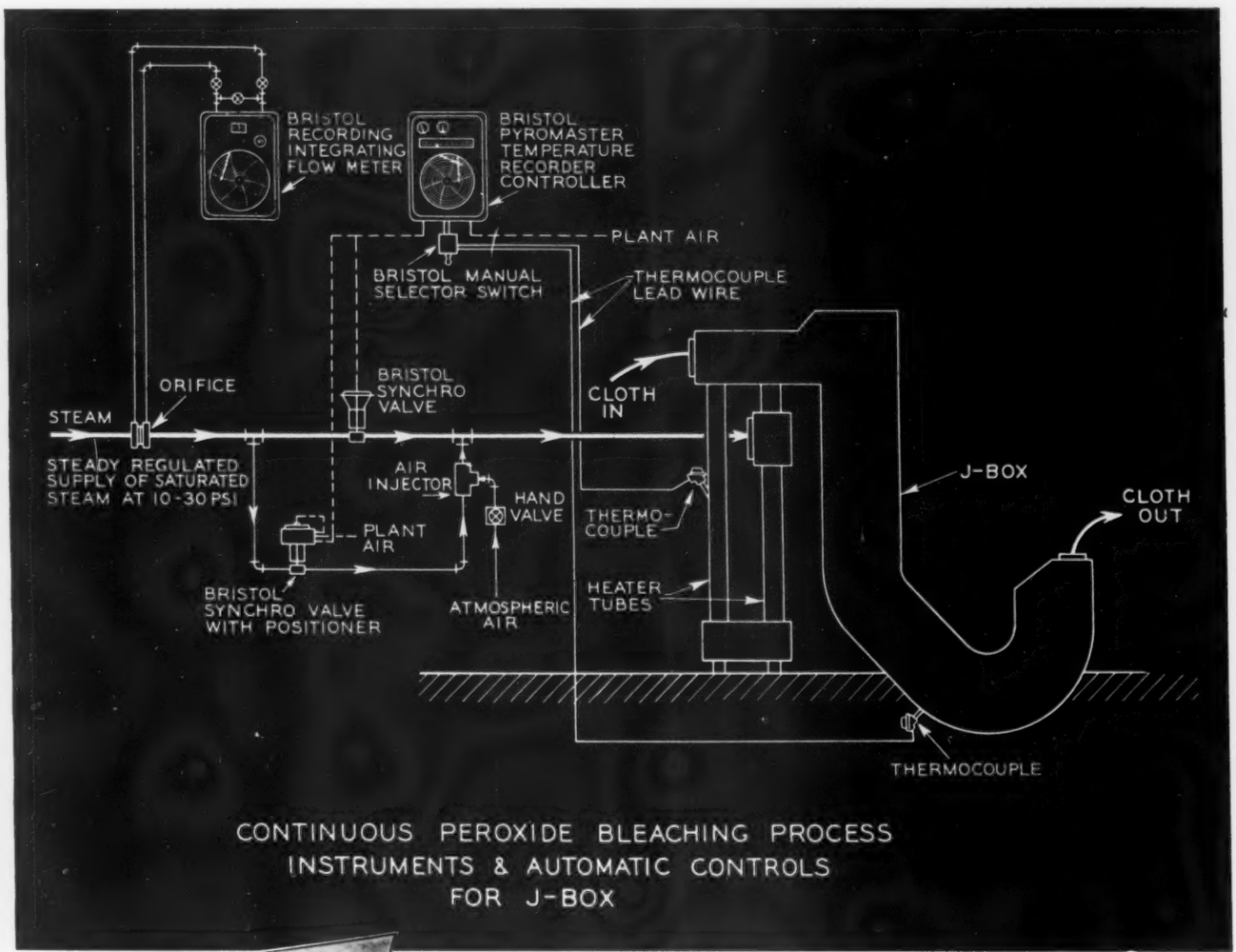
Constant automatic temperature control contributes to the efficiency of the Continuous Peroxide Bleaching Process for cotton goods, which cuts bleaching time to about one-sixth, eliminating re-runs and saving steam.

In the diagram below, showing details of the J-Box, the Bristol Temperature Controller records and controls temperature in outside heater tube by regulating the valve in the main steam line.

This Bristol instrument has a special design of thermocouple which permits taking the accurate temperature of the cloth at any desired location inside the "J" box. A number of temperatures can be taken within the "J" box by a single instrument. Both potentiometer and thermocouple are easily serviced "on the job."

The other Bristol instrument shown in the diagram is a Recording-Integrating Flowmeter which records the rate of flow and provides totalized flow on a 6-figure counter. Many other Bristol instruments are selected for automatically indicating, recording and controlling at other points in the continuous system.

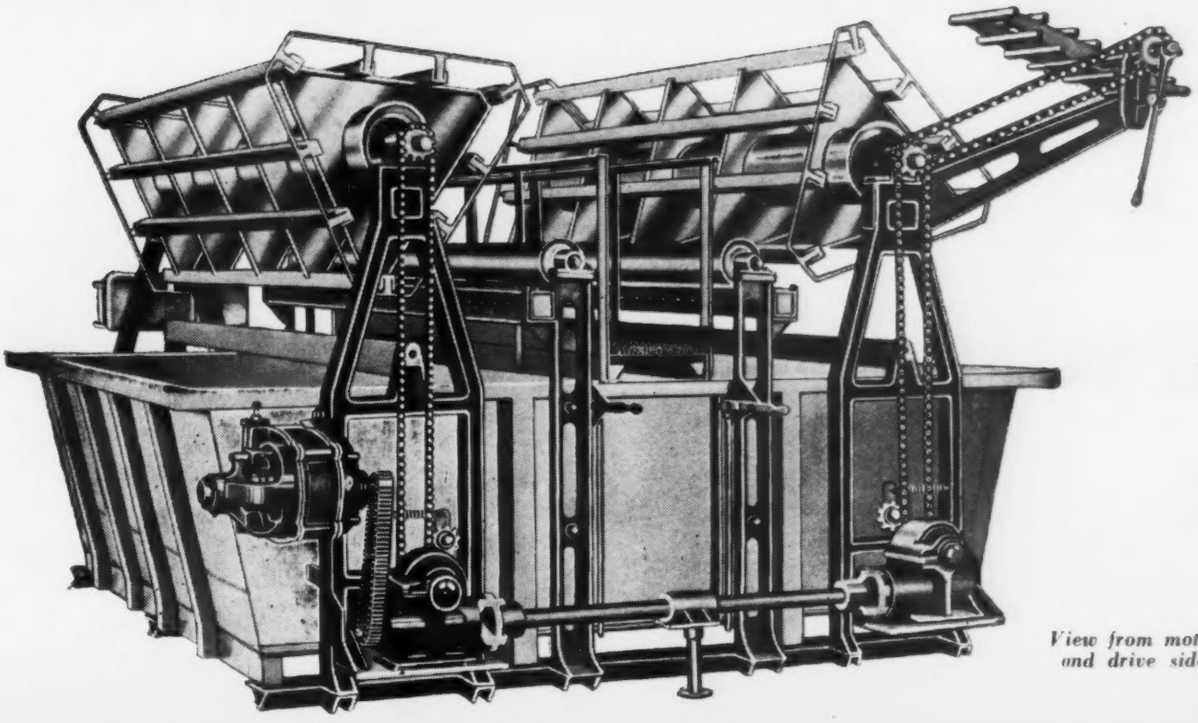
THE BRISTOL COMPANY, 157 Bristol Road, Waterbury 91, Connecticut.



CONTINUOUS PEROXIDE BLEACHING PROCESS
INSTRUMENTS & AUTOMATIC CONTROLS
FOR J-BOX

Engineers process control for better products and profits

AUTOMATIC CONTROLLING AND RECORDING INSTRUMENTS



View from motor and drive side

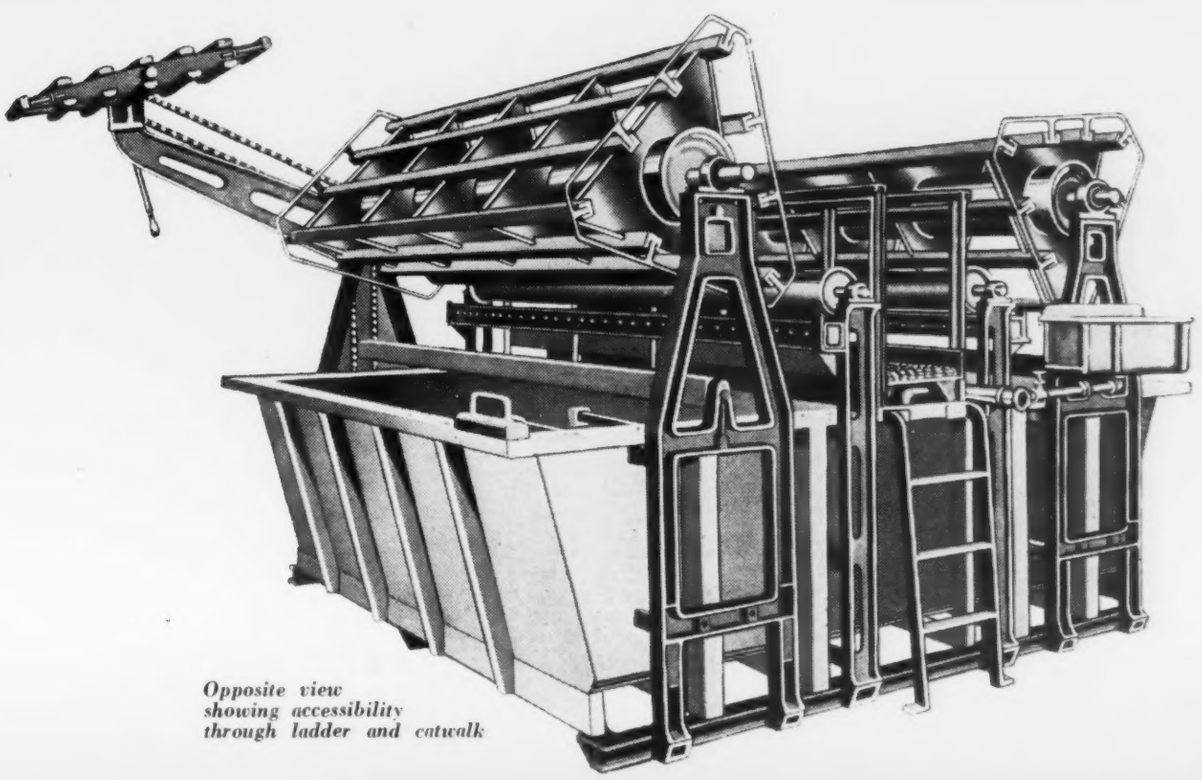
VAN VLAANDEREN *Duplex Reel* DYEING MACHINE

This patented Dyeing Machine is specially designed to do continuous strand form piece dyeing and will accommodate all qualities of goods from lingerie sheers to heavy dress fabrics. It is a decided improvement over the conventional type dyeing machine. It incorporates features, exclusive with Van Vlaanderen Wet Processing Machines, that have proven their practical operation over a period of years.

Built to the accepted Van Vlaanderen standard of ruggedness, this machine is available with stainless steel tubs or with hardwood tubs. The reels are of stainless steel as well as all parts of the machine that come in contact with the dye liquid. Write for new folder giving full information.

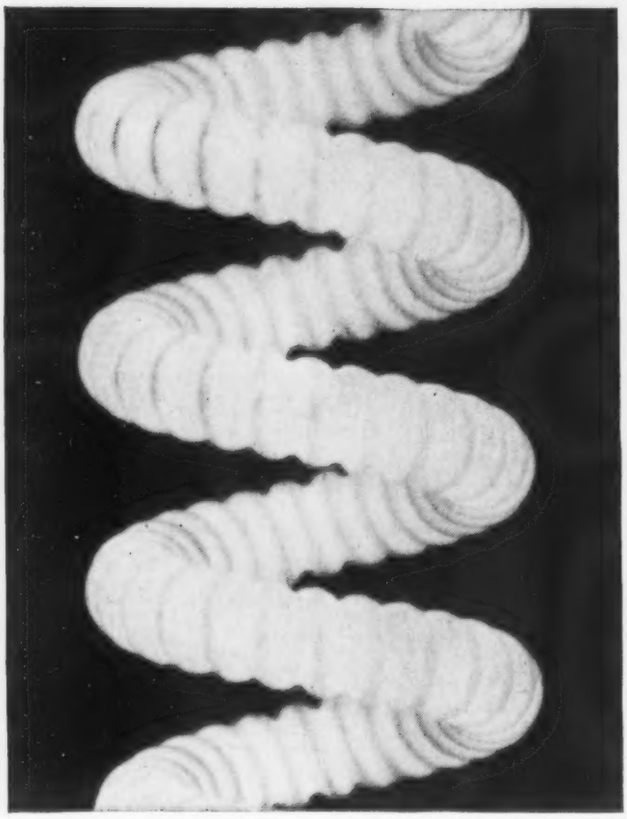
VAN VLAANDEREN MACHINE COMPANY, 370 Straight Street, Paterson 2, New Jersey

World's largest manufacturer of machines for processing modern fabrics



Opposite view showing accessibility through ladder and catwalk

How to buy Fluorescent Lamps like an Expert:



1 ***You Could Spend a Lifetime*** becoming an expert on fluorescent lighting. One good start would be to retrace the ground General Electric research men had to cover in developing the coiled-coil tungsten cathode, shown above 20 times actual size. It's this cathode that starts and maintains the electron flow inside a fluorescent lamp. First, G-E lamp men had to find a way to make tungsten wire, a feat never achieved before. Then they figured out how to coil this stubborn metal, and then coil the coil. To be an expert in your own right, you'd have to be familiar with such techniques. You'd also have to master hundreds of other fields ranging from glass blowing to electronics. Actually, of course, no one man could do it all. But there's an easy answer . . .

2 ***You Can Insist on the GE Mark*** on all the lamps you buy. In other words, let G-E lamp research men be your experts. As the people who produced the first practical fluorescent lamps, General Electric has continued to lead the field with the newest improvements. *Today, G-E lamp research is constantly at work to make G-E lamps ever better and to make them Stay Brighter Longer!

G-E LAMPS

GENERAL ELECTRIC

"MOBILIFT will solve *Materials* Handling Problems like yours"

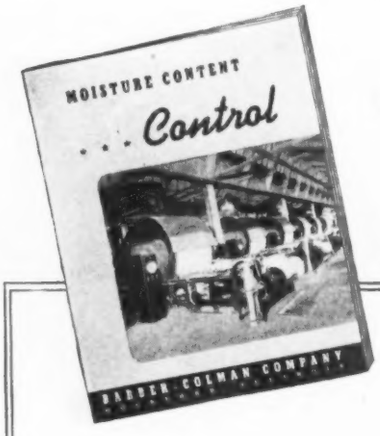
Regardless of the size of the mill you operate you'll find Mobilift "fits-in" perfectly for efficient, low cost handling. Because of its weight, size and maneuverability, Mobilift is the most adaptable of all trucks for the textile industry. It is engineered to handle any materials from bales to finished product —unloading, lifting, hauling and stacking. And best of all you can install Mobilift without disrupting your present operation. Start cutting your handling costs now with Mobilift.

SALES OFFICES:
34-48 Steinway St., Long Island, N.Y.
2430 South Parkway, Chicago 16, Ill.
107 Walton Street N. W., Atlanta, Ga.

MOBILIFT *Moves Materials like a Giant!*
VAUGHAN MOTOR COMPANY ★ 835 S. E. Main Street, Portland 14, Oregon

COMPLETE SLASHER CONTROL BY BARBER-COLMAN

For details on the principles, features, advantages, and the benefits to be gained from Barber-Colman Moisture Content Control equipment, send for this brochure. Ask for Bulletin F-1705-1.



(1) **ELECTRONIC MOISTURE CONTENT CONTROLLER** which automatically maintains uniform moisture content in the yarn delivered by the slasher. A Detector Roll senses changes in the moisture content and a Speed Control Motor varies the slasher speed to compensate for the change.

(2) **SIZE TEMPERATURE CONTROL** which automatically maintains temperature in the size box. This model includes a recording thermometer on the control panel.

(3) **SIZE BOX CONTROL** for governing conditions of size cooking. A Motor-operated valve, actuated by a thermostat on the control panel automatically admits or shuts off steam to the heating coil to maintain a uniform desired temperature in the size box.

(4) **CYLINDER TEMPERATURE CONTROL** is used on multi-cylinder slashers conventionally employed for sizing rayon and similar synthetic fibers. Each cylinder has its own automatic thermostat control, permitting the cylinders to be individually adjusted for any desired gradation of temperatures.

(5) **SIZE LEVEL CONTROL** for automatically maintaining a constant depth of liquid in the size box, and thus to assure uniform coating and proper saturation of the yarn. The system includes an electrode assembly, a motor relay, and a self-closing motor operated valve on the size line.

Barber-Colman temperature and humidity control equipment is ideal for automatically governing heating, ventilating, and air conditioning systems in weave rooms and other parts of modern textile mills.

FOR GOOD AUTOMATIC CONTROLS — LOOK TO BARBER-COLMAN

Barber-Colman Company

45 YEARS EXPERIENCE SERVING TEXTILE MILLS

ROCKFORD ILLINOIS · **BOSTON** MASSACHUSETTS · **GREENVILLE** SOUTH CAROLINA · **GREENSBORO** NORTH CAROLINA · **ATLANTA** GEORGIA

BETTER
the ANSWERS . . . THAN THE PROBLEMS
What's your packaging problem? Greater economy in packing and shipping costs? Increased protection for your product in transit? A more attractive corrugated box to increase sales? H & D's booklet, "How To Pack It," has the answers to these and many other corrugated packaging problems.
How to pack it

CORRUGATED PACKAGING
SUPPLIES THE ANSWERS

Be prepared for the time when ample raw materials are again available — let H & D Package Engineers furnish the engineering solution to your packaging problem now. Which H & D corrugated box will simplify packing, provide added protection in transit, attract customer attention and increase sales and profits? Perhaps you need a combination shipping display box, easily and quickly set up by the dealer. Or maybe your product requires a specially-designed gift box, or a handy "take-with" box. Send for "How To Pack It," a complete, informative catalog of H & D corrugated packaging. For your copy, write The Hinde & Dauch Paper Company, Executive Offices, 4610 Decatur Street, Sandusky, Ohio.

REG. U. S. PAT. OFF.

H&D HINDE & DAUCH

PACE-SETTER OF THE PACKAGING INDUSTRY

FACTORIES IN: Baltimore • Boston • Buffalo • Chicago • Cleveland • Detroit • Gloucester, N. J. Hoboken • Kansas City • Lenoir, N. C. • Montreal • Richmond • St. Louis • Sandusky, Ohio • Toronto

MAXITORQ FLOATING DISC
MAXITORQ FLOATING DISC
MAXITORQ FLOATING DISC
MAXITORQ FLOATING DISC
MAXITORQ FLOATING DISC
MAXITORQ FLOATING DISC
MAXITORQ

MAXITORQ

MEANS INDUSTRIAL POWER TRANSMISSION YOU CAN *depend* UPON

!

Both single and double (above) clutches are available in wet and dry types. Also pulley and cut-off coupling models. Capacities from 1/4 to 15 H.P. @ 100 R.P.M.

When products are normal . . .

The Maxitorq standard clutch fills practically all needs for machine tool and general machinery use up to ratings of 15 H.P. @ 100 R.P.M.

Floating Discs are held apart in neutral by the Maxitorq (patented) Separator Springs, so that you can see between them . . . no drag, no abrasion, no heating. Disengagement is fast and positive. The clutch comes to you completely assembled on the body . . . ready to slip onto a shaft. NO tools are necessary for assembly, adjustment or take-apart.

When products are fragile . . .

The new Maxitorq automatic Overload Release Clutch has been enthusiastically welcomed by manufacturers of high speed machinery as a safety factor.

By means of a sensitive finger-tip adjustment the disconnecting means may be set so that instant release takes place at any desired degree of overload.

In all other respects this special design is the same as the standard type. It is especially valuable on automatic machinery which produces breakable or damageable products, high speed can and bottle labeling machines, packaging machines, etc.

OVERLOAD RELEASE TYPE

Note the cams which cause instant automatic release. Six sizes available from 1/4 to 5 H.P. @ 100 R.P.M. Used on continuous shaft or as a cut-off coupling to connect two shafts.

SEND FOR CATALOG NO. 466

TRADE MAXITORQ MARK

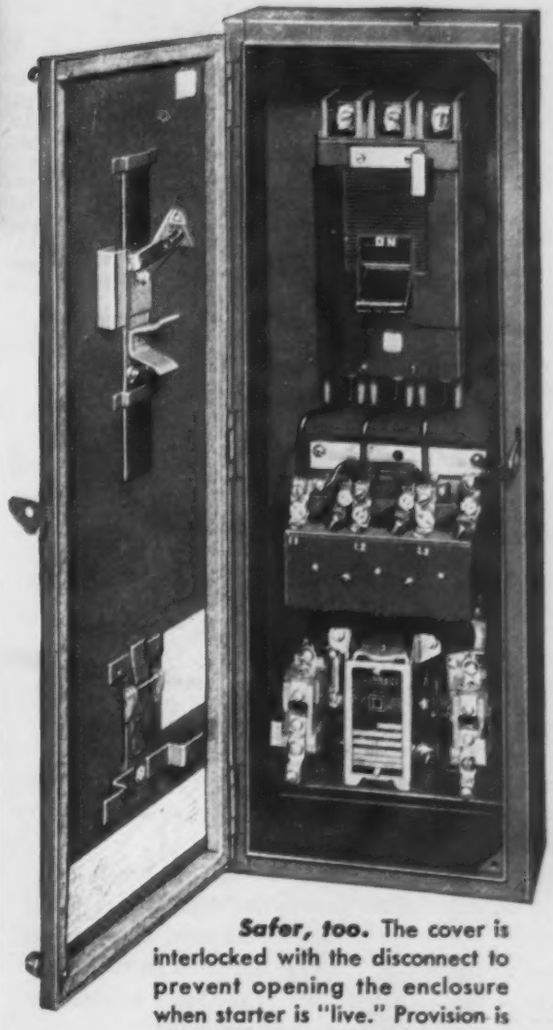
THE CARLYLE JOHNSON MACHINE COMPANY
MANCHESTER CONNECTICUT

Square D Front-operated Combination Starters

● You save time by using combination starters. Since the disconnect (switch or breaker) and the magnetic starter are housed in one enclosure, you cut mounting time in half and also save wiring time.

A combination starter takes less space than two separate devices. These Square D front-operated units save still more space. They are especially suitable for "ganging."

Square D front-operated starters are available in three capacities—sizes 0, I, and II. Some types of larger sizes are side-operated. For informative bulletin, address Square D Company, Industrial Controller Division, 4041 North Richards St., Milwaukee 12, Wis.

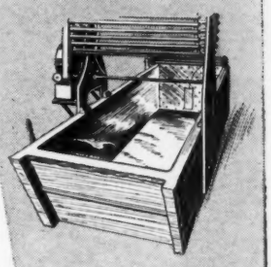


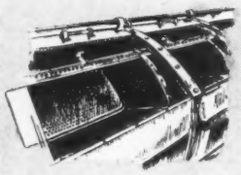
Safer, too. **The cover is interlocked with the disconnect to prevent opening the enclosure when starter is "live." Provision is also made for padlocking the disconnect in the "OFF" position.**

SQUARE D COMPANY

DETROIT • MILWAUKEE • LOS ANGELES

8 years' dyeing service
and NO SIGN of CORROSION!





WISCASSETT MILLS COMPANY

The Mark Of WISCASSETT *Excellence*

Selling Agents
CANNON MILLS, INC.
70 WORTH ST.
NEW YORK, 13

T. R. SMITH, Mgr.
Yarn Dyeing Dept.

ALBEMARLE, N.C.

April 12, 1946

The International Nickel Company, Inc.
67 Wall Street
New York 5, N.Y.

Gentlemen:

Replying to your letter of March 29th, with reference to twin package dyeing machine of Inconel which we have had in operation now for approximately eight years. We beg to advise that this machine has given us excellent service. We have dyed all types of colors on cotton yarns: vats, develops, directs, sulfurs, naphthols, etc., and no corrosion whatever has ever appeared on the metal. The surface of the metal stays bright. Practically no cleaning from one color to another is required, and we are very well pleased and satisfied with the performance of Inconel in this installation.

With kindest regards from the writer, we are

Yours very truly,

WISCASSETT MILLS COMPANY
YARN DYEING DEPARTMENT

By: T. R. Smith

T. R. Smith

TRS/ab

EIGHT YEARS AGO, Wiscassett Mills Company, Albemarle, N. C., installed a new twin package dyeing machine. They use it with all types of colors for cotton yarns.

In the letter reproduced above, T. R. Smith, manager of Wiscassett's yarn dyeing department, makes several significant comments. He says, for example, that no corrosion "has ever appeared on the metal. The surface . . . stays bright. Practically no cleaning from one color to another is required."

That's easily understandable. For, when the R. D. Cole Manufacturing Co., Newman, Ga., built this machine for Wiscassett Mills, they used INCONEL*. This rugged, rustless 80 Nickel-14 Chromium alloy is especially well suited for all dyeing processes. It resists strong alkalies, chlorides and reducing acids; it wards off harmful attack by many oxidizing acids.

Although Inconel exceeds structural steel in both strength and toughness, no special techniques are required for its fabrication and welding. The availability of standard mill forms and castings keeps costs down. Where plate thicknesses are to be 3/16" or greater, Inconel-clad steel answers the purpose—and is more economical.

You'll find further information concerning the advantages and uses of this superior metal for textile dyeing equipment in Technical Bulletin T-7, *Engineering Properties of Inconel.* We'll be glad to mail you a copy upon receipt of your request.

*Reg. U. S. Pat. Off.

THE INTERNATIONAL NICKEL COMPANY, INC., 67 Wall Street, New York 5, N. Y.

INCONEL
(80 NICKEL-14 CHROMIUM)

New scope

IN SWIMSUIT FABRICS

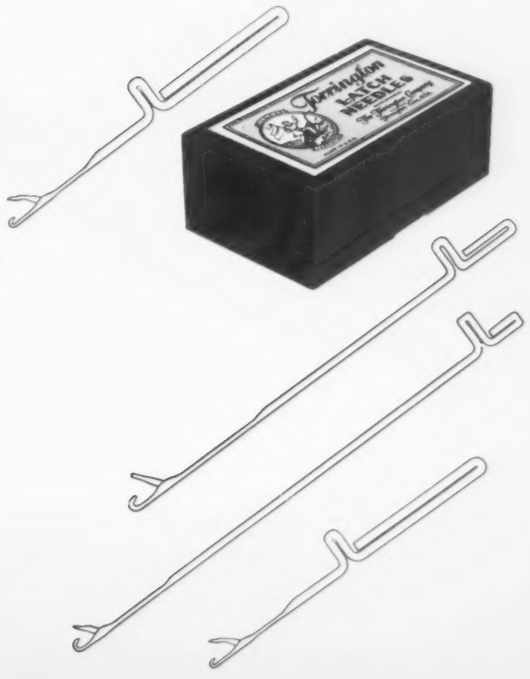
with Knitting by Torrington Needles

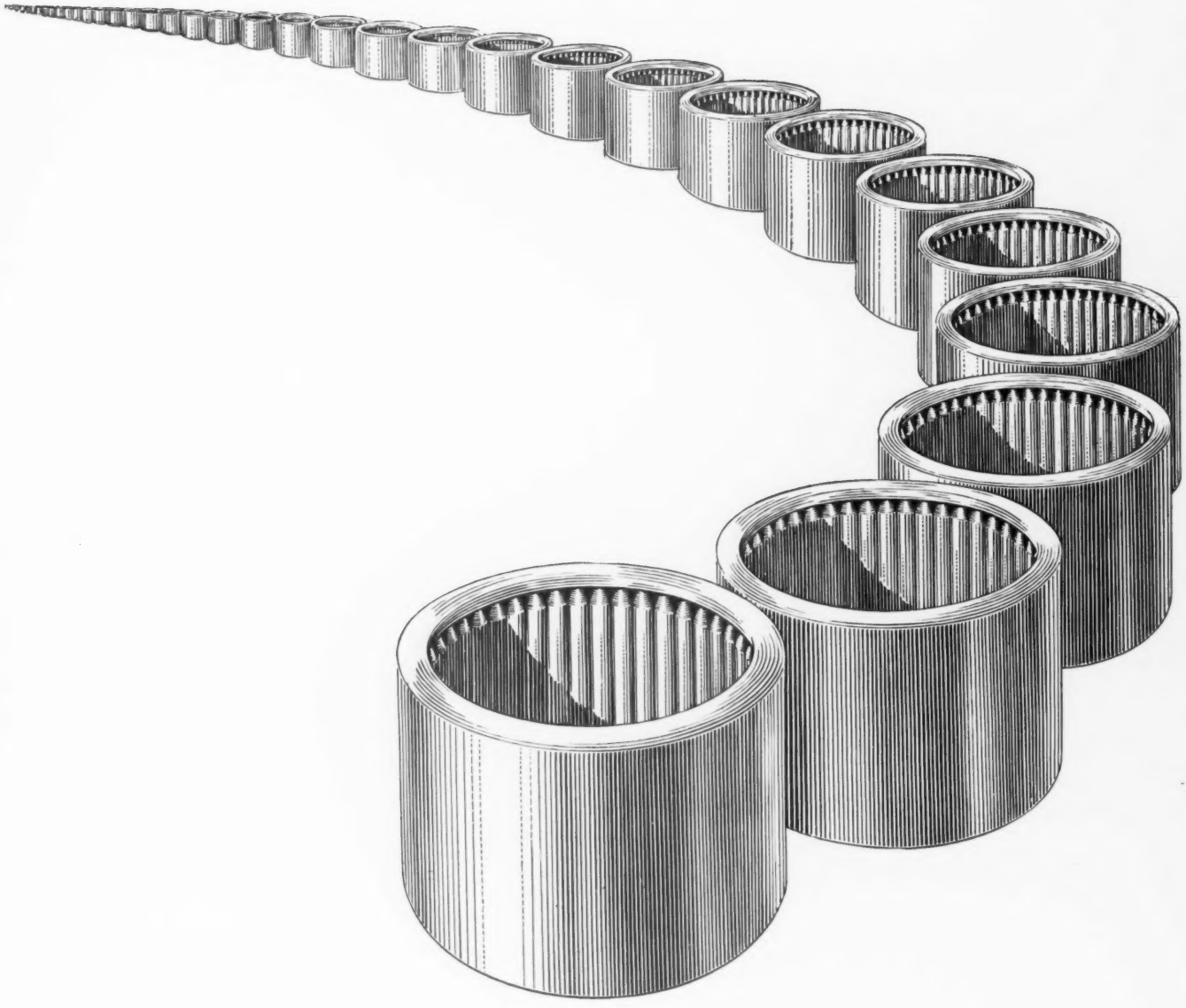
ONE of the most important requirements of a knitted swimsuit is flexibility. It must fit snugly yet stretch easily to allow free body movement and still retain its shape through long wear. Here is where good knitting is a prime necessity.

Torrington Needles contribute to these qualities by producing accurate, uniform stitches. The fine temper, smooth finish and uniform dimensions of Torrington Needles are assured by special precision methods of manufacture. If you are not already using Torrington's precision-engineered Needles in your machines, we believe one trial will convince you of their top-quality features.

TORRINGTON
Latch Needles

THE TORRINGTON COMPANY
Established 1866
Torrington, Conn., U. S. A.
Branches: New York • Philadelphia
Chicago • Greensboro, N. C. • Boston
St. Louis • Toronto, Canada





They're cutting operating costs all along the line

Economy of operation is an inherent feature of Torrington Needle Bearings, and it shows up in the form of measurable cost savings all down the line. . . .

In power costs . . . The tremendous radial capacity of Needle Bearings, combined with their low coefficient of friction and equalized load distribution at operating speeds, assures minimum starting and running friction . . . less power consumption.

In lubrication costs . . . The close-fitting, turned-in lips of the hardened outer shell form a reservoir to retain the lubricant and distribute it evenly over all of the bearing surfaces. Thus, less frequent lubrication and maintenance are required, and bearing wear is reduced to the vanishing point.

In servicing or replacement costs . . . Needle Bearings also contribute marked economies. They never seem to need attention, seldom if ever is a replacement required. This is due directly to their design, high load capacity and efficient lubrication.

In your own industry, compact, low-cost Torrington Needle Bearings have solved innumerable friction problems. Our Catalog 32, copy of which is available upon request, will give you a comprehensive picture of Needle Bearing advantages as applied to the machines *you* design, build or operate.

•

THE TORRINGTON COMPANY

TORRINGTON, CONN. SOUTH BEND 21, IND.

Offices in All Principal Cities

TORRINGTON NEEDLE BEARINGS

5 reasons to specify TECA

TECA REDUCES SHRINKAGE

A fiber with low moisture absorption, Teca undergoes little or no change when washed or cleaned. A high Teca content tends to stabilize a fabric, decreasing its shrinkage.

●

TECA IS CRUSH RESISTANT

and sag resistant. The natural resilience of this fiber helps to build a fabric with superior shape-holding qualities.

●

TECA INSULATES

or ventilates, depending on the weave. Its tiny crimped fibers help to create a porous texture in the fabric.

●

TECA IS NONIRRITATING

Teca has the inherent softness and suppleness typical of acetate rayon, is pleasantly smooth to the skin.

●

TECA BLENDS WELL

with silk, wool, cotton, or viscose rayon, offering almost limitless textural variety as well as novel cross-dyed effects.

Eastman

CRIMPED ACETATE RAYON

For further information about Teca, consult A. M. TENNEY ASSOCIATES, Inc., 10 East 40th Street, New York 16, Sales Representatives for Tennessee Eastman Corporation (Subsidiary of Eastman Kodak Co.), Kingsport, Tennessee

are you getting the benefits of OTIS MAINTENANCE SERVICE?

In the past ten years the number of Otis elevators under Otis Maintenance more than doubled. It also more than doubled in the previous ten years.

Under Otis Maintenance building owners and managers are freed from all details of elevator care and repair. At the same time tenant satisfaction is increased, more freight is moved and time saved. Those are the reasons why owners and managers know that Otis Maintenance pays.

Otis Maintenance is a home town service because it operates through 245 branch offices, each adapted to the area it serves. It is an integrated national enterprise because it brings the research, engineering and production facilities of the manufacturer directly to your door.

Otis Maintenance is for Otis elevators. It is available at a flat monthly rate through your local Otis office.

Not only long Otis life, but peak Otis efficiency. This Otis maintenance man is checking the speed of an elevator to be sure it is delivering good service.

Otis ELEVATOR COMPANY
OFFICES IN ALL PRINCIPAL CITIES

WHEN

YOUR SINGEING FRAMES CAN'T KEEP UP WITH YOUR DYE-ROOM

UP TO 400 YARDS PER MINUTE (IN ONE PASS) WOULD OPEN YOUR EYES

YOU ARE SICK OF NURSING OLD-FASHIONED BURNERS

THEN

you ought to know about KEMP "radiant-flame-compression" singeing

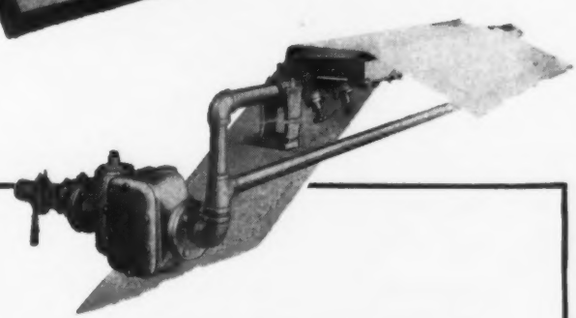
The reasons are straight from the shoulder.

First, the "radiant-flame-compression" burner was especially designed for textile processing — acetates, broadcloths, corduroys, damasks, drills, felts, mohairs, rayons, sheetings, shirtings, twills, velours, voiles, yarns. It is a recent improvement based on 20 years of KEMP experience in designing singeing systems for finishers.

Second, users repeatedly report closer, more uniform, faster singes. The stop-watch has recorded speeds upwards of 400 yds. per min. Frame speed-ups of 75%, 100% and even 200% are common. Both sides can be singed in a single pass through a 2-burner frame.

Third, less fuel is used per pound of material — because the gas is more perfectly carbureted and efficiently utilized.

All it takes to "get down to cases" on your singeing problems is your name and checkmark on the coupon below.



HOW "RADIANT-FLAME-COMPRESSION" WORKS

The flames (hundreds of them in precision rows) are directed at the cloth at an angle of 45°—and travel with the material as it races between the water-cooled burner lips. The cloth forms one side of the combustion chamber—an incandescent refractory surface forms the opposite side. Because the combustion chamber is wedge-shaped, it keeps the burning gases *in compression* under the cloth all the way to exhaust.

And the gas is so perfectly carbureted and combusted that there is no excess oxygen in the flame. The nap, therefore, is carbonized (not burned) and blown away with the escaping gases.

KEMP OF BALTIMORE

PRECISION CARBURETION + ADAPTED COMBUSTION FOR INDUSTRY'S HEAT-USING PROCESSES
ATMOSPHERE GENERATION & ADSORPTIVE DRYER SYSTEMS FOR PROCESS CONTROL AND PROTECTION

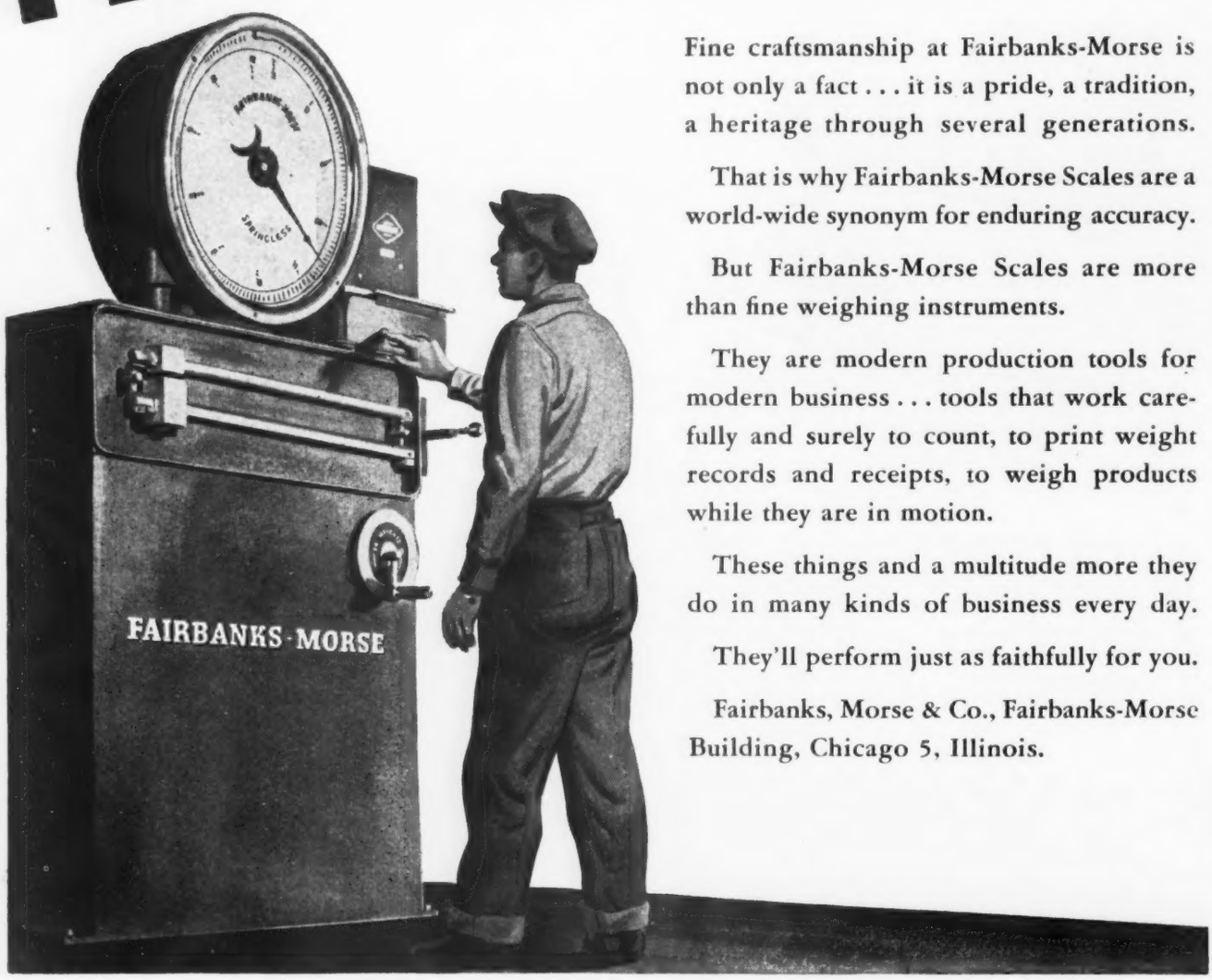
JMLco-K-Eltw

405 E. Oliver Street, Baltimore 2, Md.
The C.M. Kemp Mfg. Co.

Send me your literature, and the names of major mills which use your system ☐
Send a field engineer to see us ☐

NAME .....
POSITION .....
COMPANY .....
PLACE .....

SEE FAIRBANKS-MORSE FIRST FOR SCALES



Fine craftsmanship at Fairbanks-Morse is not only a fact . . . it is a pride, a tradition, a heritage through several generations.

That is why Fairbanks-Morse Scales are a world-wide synonym for enduring accuracy.

But Fairbanks-Morse Scales are more than fine weighing instruments.

They are modern production tools for modern business . . . tools that work carefully and surely to count, to print weight records and receipts, to weigh products while they are in motion.

These things and a multitude more they do in many kinds of business every day.

They'll perform just as faithfully for you.

Fairbanks, Morse & Co., Fairbanks-Morse Building, Chicago 5, Illinois.

Fairbanks-Morse

A name worth remembering

Diesel Locomotives • Diesel Engines Scales • Motors • Pumps • Generators Magnetos • Stokers • Railroad Motor Cars and Standpipes • Farm Equipment

Call on
KNOX
for dependable, electroplating and heat treating service.

YOU know how it is—often, even the most carefully worked out plans can go wrong unless backed by *dependable* production. You can frequently avoid costly break-downs and production tie-ups in your plant by calling on Knox for high calibre Electroplating or Heat Treating service.

You will be efficiently served by one of the finest and most modern electroplating and heat treating plants in the South—no matter how exacting your requirements may be.

Safeguard even split-second-timed production schedules by maintaining constant contact with the Electroplating and Heat Treating Division of the Knox Corporation. Make certain that your important plans are "trouble" free.

KNOX CORPORATION

KNOX Corporation
ELECTROPLATING AND HEAT TREATING DIVISION
AUGUSTA, GEORGIA

"A *GREAT* Name in Southern Industry"

For assured performance, the valve must suit the service!

For many services Iron Valves are fully adequate. In others, Bronze Valves are especially suitable. And, in many cases, Steel Valves are definitely required, even at the lower pressures. The same principles apply to design. If, in some services, Bronze Valves with integral seats will be most satisfactory, why install valves with renewable seats of special materials. On the other hand the service conditions may be such that the latter type will be far more economical in the long run.

The Powell Line includes *all* kinds, including a complete line of Corrosion Resistant Valves for process lines. Catalogs furnished on request. Kindly specify whether you are interested in Bronze and Iron Valves; Steel Valves; or Valves for Corrosion Resistance. If you wish advice in selecting the correct valves, Powell Engineering is always at your service.

The Wm. Powell Co., Cincinnati 22, Ohio

DISTRIBUTORS AND STOCKS IN ALL PRINCIPAL CITIES

Fig. 190

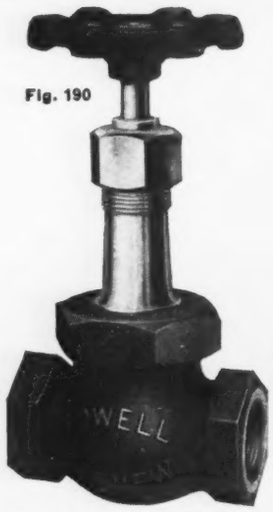


Fig. 190—150-pound Iron Body Bronze Mounted "Irenew" Globe Valve. Has screwed ends, Union bonnet and regindable, renewable wear-resisting "Powellium" seat and disc. Also available in All Iron for process lines.

Fig. 150

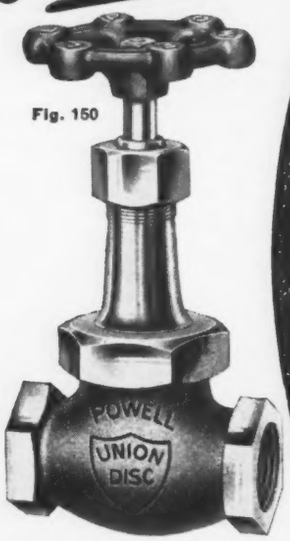


Fig. 150—150-pound Bronze Globe Valve with screwed ends, union bonnet and renewable composition disc.

Fig. 500

Fig. 500—125-pound Bronze Gate Valve with screwed ends, inside screw rising stem, screwed-in bonnet and either taper wedge solid or double disc.

Fig. 1503

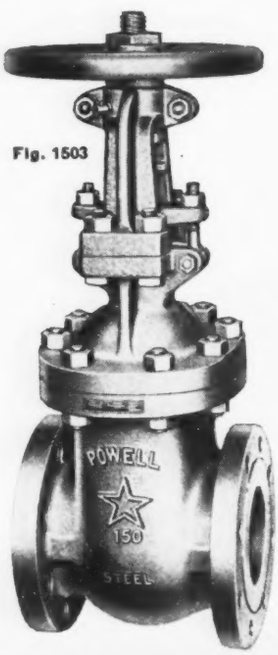


Fig. 1503—Class 150-pound Cast Steel Gate Valve. Has flanged ends, outside screw rising stem, bolted flanged yoke and taper wedge solid disc.

Fig. 241

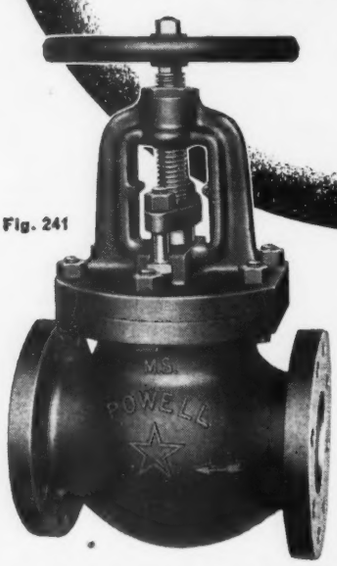
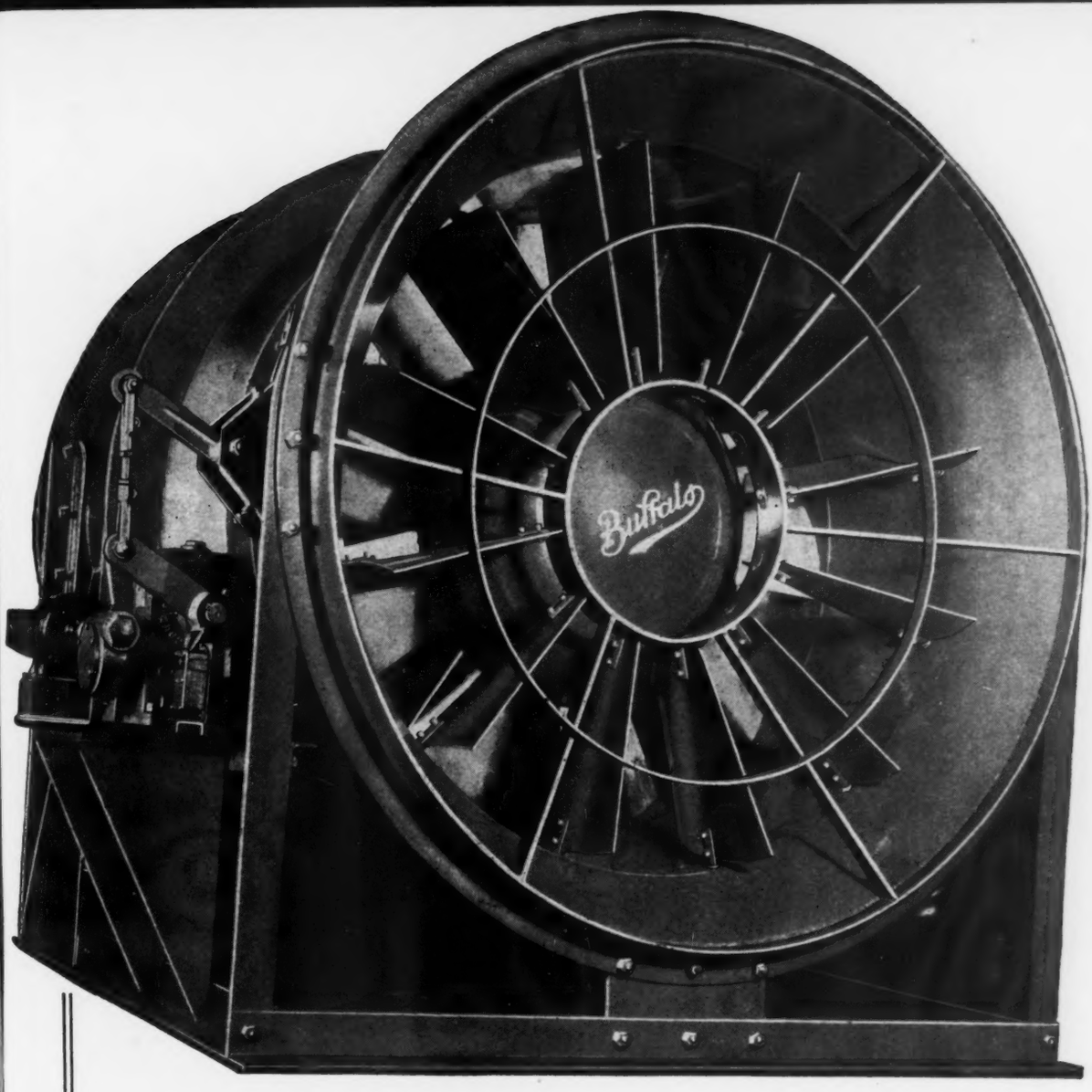


Fig. 241—125-pound Iron Body Bronze Mounted Globe Valve with flanged ends, outside screw rising stem, bolted flanged yoke and regrindable, renewable bronze seat and disc. Also available in All Iron for process lines.

Fig. 1793—125-pound Iron Body Bronze Mounted Gate Valve with flanged ends, outside screw rising stem, bolted flanged yoke, bronze seat rings and taper wedge solid disc. Also available in All Iron for process lines.

Fig. 1793

POWELL VALVES



DESIGNED to deliver *More Air!*

When Buffalo engineers designed the Buffalo Axial Flow Fan, they had two goals—an efficient fan (which means more air for less horsepower) and a reliable fan, which means rugged construction and correct proportioning of all parts.

The resulting design met both requirements. By giving the air leaving the rotor a true axial direction, power-wasting turbulence was eliminated. By putting metal where it was needed in rotor and housing, a sturdy, vibrationless fan was built.

Ask for Bulletin 3533 to see for yourself how this fan appears and performs.

BUFFALO FORGE COMPANY

184 Mortimer St., Buffalo, New York

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

"Buffalo"

AXIAL FLOW FANS

Widely Adaptable New Acid Valve

FEATURES SPLIT BODY AND REMOVABLE SEAT

Two Valves in One: Simply reverse the position of the body sections and the new "United" Type "R" Valve is changed from a "Y" pattern to an Angle pattern.

Removable Seat and Plug-Disc in Any Alloy: Not only the plug disc but the seat itself is removable for easy, economical maintenance. Or seat and plug of any desired alloy can be installed.

NATIONAL LEAD'S VERSATILE UNITED TYPE "R" VALVE SLICES INVENTORY AND MAINTENANCE COST

This ingenious new "many purpose" valve offers a combination of advantages unobtainable with valves where body and seat are cast as an integral unit.

For one thing, it can be installed either as a "Y" or Angle pattern, simply by reversing the position of the body section, as shown in the illustration at the right. This enables you to reduce your supply stock by standardizing on one valve with two uses.

Again, since the seat is removable, as well as the plug disc, both can be replaced easily at nominal cost, thereby effecting worthwhile economies in maintenance.

Moreover, seat and plug disc can be fabricated in any alloy you specify . . . "custom-made" to withstand abrasive or other particularly hard-to-handle fluids. For more normal applications the valve can be furnished three standard ways: 1. With lead plug disc and stem integral; 2. With removable lead plug disc; 3. With removable rubber plug disc.

It is fabricated not only in hard lead but also in lead lined 125 lb. cast iron and 150 lb. cast steel types.

Further information regarding the "United" Type "R" Split-Body Flanged Valves will be furnished gladly upon request.

* * *

Remember, National Lead also manufactures acid valves of many other types, both lead lined and hard lead, in all required sizes and styles . . . gate, angle, check, diaphragm and free-flow "Y" types . . . as well as special valves designed to specification.

* * *

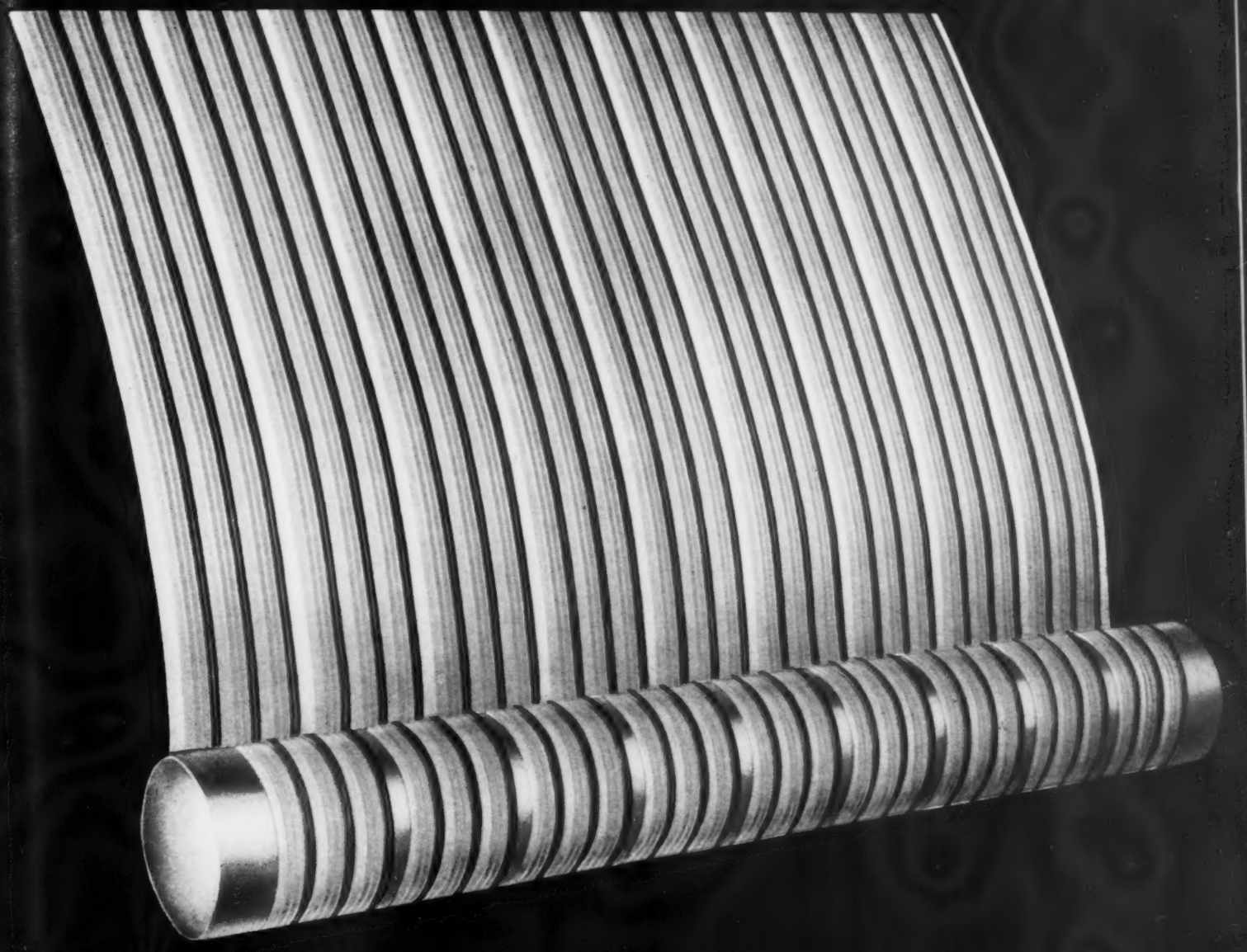
No matter what your needs — from lead pipe . . . to lead lined, covered or lead bonded equipment . . . to complete acid recovery plants . . . National Lead is ready to supply you.

Consult our Technical Staff and benefit by years of experience with thousands of lead installations in every field handling corrosive solutions and gases.

IF ACID HANDLING IS YOUR PROBLEM . . .

Go "National" for Lead

NATIONAL LEAD COMPANY
111 Broadway, New York 6, N. Y.
Offices and Plants in Principal Cities and Canada



WOULD YOU PRINT THIS SHIRTING PATTERN WITH ONE ROLL OR THREE ?

To produce this pattern with conventional dyes, you'd make three engravings, print as a 3-color job, age, soap and dry. But Clearwater Manufacturing Company used a far simpler, less expensive method. They made a mill-and-dye engraving in three depths to provide three gradations in shade, and printed with Aridye* Pigment Colors on a *single printing roll!*

The formula used to print this pattern was Aridye green FJ3B cut 1:5 with regular Aridye clear. Goods were dried on cans; no aging or soaping was necessary. The results were:

1. Thousands of yards of shirting with a sharp, well-defined pattern, which met or exceeded all of the usual fastness requirements.
2. Danger of one color running into another was entirely eliminated.
3. Printing costs were reduced.

This is but one of many examples showing how Aridye Pigment Colors are being used to advantage in every-day printing jobs. Mill men are also finding out that Aridye Pigment Colors are the answer to unusual printing problems which would be difficult or impossible to solve by the use of ordinary dyes or conventional methods.

Why not have an Aridye technical service man discuss your printing and dyeing problems with you? Write to Aridye Corporation—Pioneers in Pigment Colors for Textiles—Fair Lawn, N. J.

*Reg. U. S. Pat. Off.

CHECK THESE 8 ADVANTAGES

Sharpness of Mark • Exceptional Fastness to Sunlight
Uniformity of Shade • Fastness to Washing • Bright Colors
Economy • Ease of Application • No Impairment of Hand

Aridye *Pigment colors*

ARIDYE CORPORATION • A SUBSIDIARY OF INTERCHEMICAL CORP., FAIR LAWN, N. J. • ROCK HILL, S. C. • PROVIDENCE, R. I.

John P. Maguire & Company

INCORPORATED

Factors

370 FOURTH AVENUE

NEW YORK 10,

N. Y.

Check Credits

Cash Sales

Absorb Credit Losses

CORRESPONDENCE INVITED

The Clean Air Zone

PROTECTS

TEXTILE MILL PRODUCTION

SAVING MILLIONS ANNUALLY IN SPOILAGE AND REJECTS

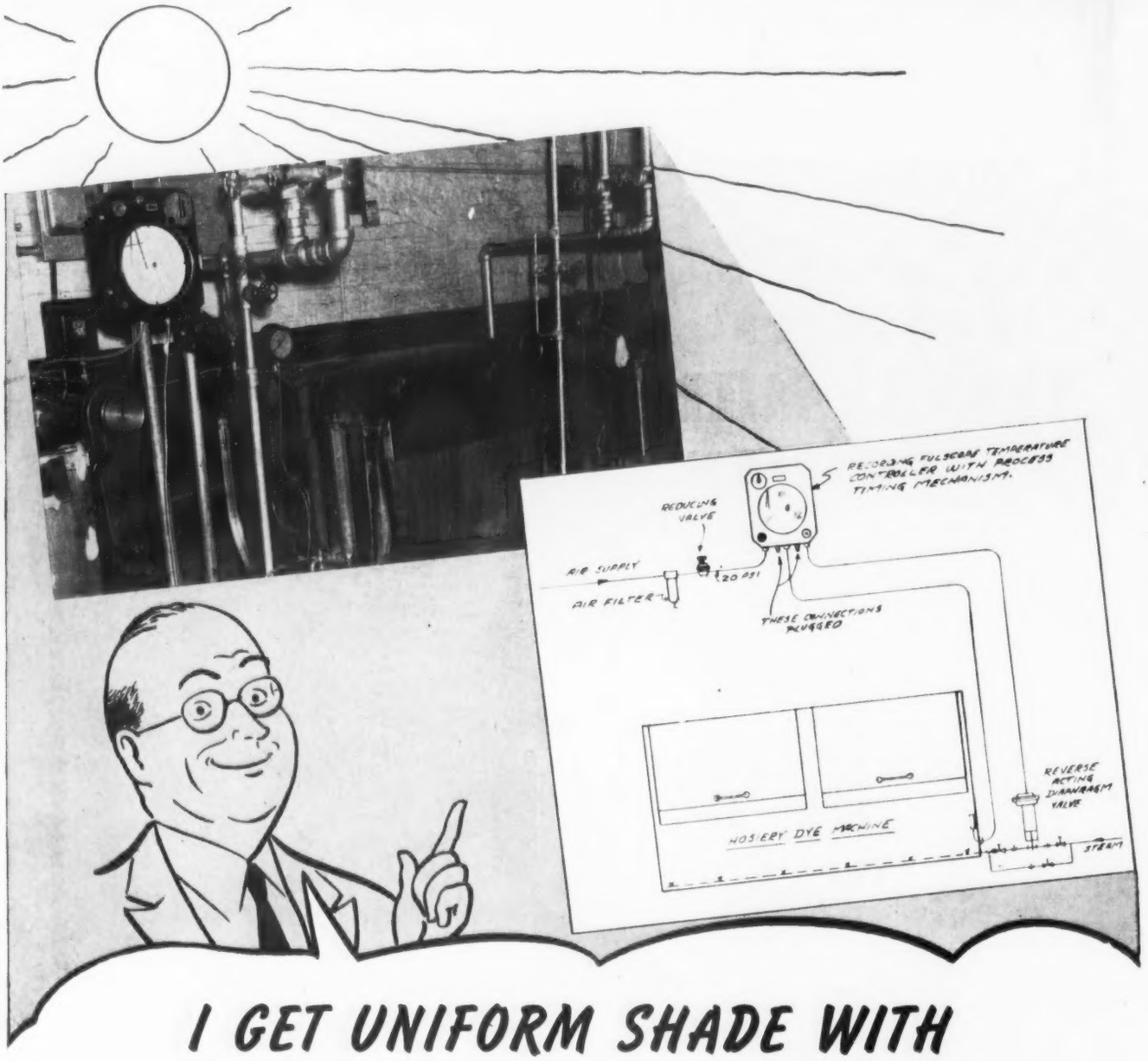
Super clean air — free from dust, soot and smoke particles — has been a recognized necessity for textile mills for a number of years, but until the advent of the Electronic air filter the problem of keeping production absolutely clean remained unsolved. This need is met in a most efficient, practical and economical way with AAF Electro-Matic Electronic air filters. The Electro-Matic removes the largest to smallest soot particles which can sabotage production. Many leaders in the industry are installing this equipment. Write for Bulletin No. 250-D.

AMERICAN AIR FILTER CO., INC., 304 Central Avenue, Louisville 8, Kentucky

In Canada: Darling Bros., Ltd., Montreal, P. Q.

Electro-MATIC

THE AAF ELECTRONIC AIR FILTER



I GET UNIFORM SHADE WITH THE HELP OF TAYLOR CONTROLS!

A GOOD beach umbrella might give you the shade you want—but not in your hosiery dye machines. That's a job that calls for automatic Taylor Controls! They are your most dependable helpers in repeating batch after batch with the same uniform shade.

Picture and diagram show how a Taylor Fulscope Recording Temperature Controller puts the dyeing operation on a completely automatic basis. Equipped with a Taylor Process Timer this versatile instrument gives you exact timing of each phase of your dyeing operation, as well as accurate control of temperature. All you do is set the instrument for the desired temperature and time period. Timing does not start until the dye liquor is up to set temperature. And at the end of the time period the Process Timer automatically terminates the process.

This is only one example of how Taylor Controls improve your production. If you have a processing problem let us hear from you. Call your Taylor Field Engineer or write to Taylor Instrument Companies, Rochester, N. Y., or Toronto, Canada. *Instruments for indicating, recording and controlling temperature, pressure, humidity, flow and liquid level.*

Taylor Instruments
MEAN
ACCURACY FIRST
IN HOME AND INDUSTRY

Firestone

Velon *

FIBRE

is weaving new sales patterns for you

Open the door to new markets where smart, light, bright colors were never before practical. *Velon* makes textiles that are both luxurious and imperishable.

***Velon* defies dirt.** Grease and grime can't cling to its non-porous threads. Its original beauty is easily restored with a damp cloth.

***Velon* defies wear.** Each filament is a single thread of giant strength—amazingly resistant to abrasion, snagging and scuffing.

***Velon* defies fading.** Can't fade, run or wash out because the color is inherent in the structure of the monofilament.

***Velon* is ideally suited** to such volume markets as transportation, home and institutional seating, outdoor furniture, drapes, wall-trim, screens, awnings, luggage, shoes.

Adapts to your methods. Firestone engineers will gladly consult with yours, and show you how easily *Velon* fits your manufacturing set-up.

BEST TODAY... STILL BETTER TOMORROW

Write Firestone, Akron, for samples of *Velon* yarn and free full-color *Velon* booklet.

Listen to the Voice of Firestone Monday Evenings over NBC

*TRADE MARK

AVOID UNEVEN DRAFT with SINCLAIR NO-DRIP LUBRICANTS

IF UNEVEN draft and high yarn breakage are problems that seem to defy solution, look into your lubrication.

Faulty lubrication can produce these unwanted results. Besides being creep and drip-proof, a *correct* lubricant must flow evenly through the saddle bore or wick, must be made to minimize roll neck friction.

Sinclair NO-DRIP LUBRICANTS give you the correct combination of qualities. They're made in 5 grades—all smooth flowing, non-dripping, non-creeping. For clean, efficient top roll lubrication try Sinclair NO-DRIP LUBRICANTS.

SINCLAIR TEXTILE LUBRICANTS

FOR FULL INFORMATION OR LUBRICATION COUNSEL *WRITE* SINCLAIR REFINING COMPANY, 630 FIFTH AVENUE, NEW YORK 20, N. Y.

MAY WE SAY.. *Sensational!*

All-Aluminum, Honeycomb Balloon Creel, made by Danica Laboratories, Paterson, New Jersey.

NEW DANICA CREEL IS *All-Aluminum*

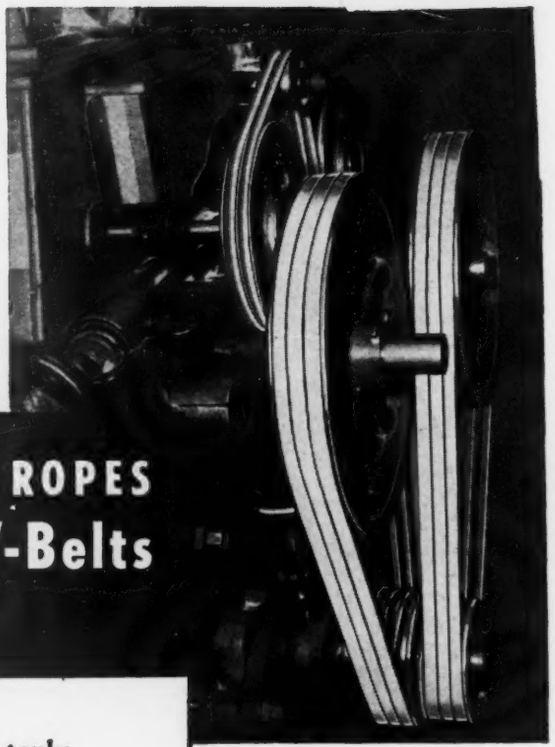
Revolutionary and daring are words which might best describe this new, all-aluminum, warping creel. It permits unlimited warping speeds for cones, spools or tubes in any yarn from the finest to the coarsest—truly an outstanding creel development.

Aluminum fits the requirements of this textile equipment perfectly. It made it light, cut floor loading to a minimum. Made it portable for quick and easy changes to other warpers around the mill. Strong, durable, corrosion resistant, will not rust, requires no protective paint—these are other qualities that made aluminum the *right* material for this Danica creel. The same factors apply to all other textile equipment.

Be sure to ask your supplier for equipment built of Alcoa Aluminum. ALUMINUM COMPANY OF AMERICA, 1942 Gulf Bldg., Pittsburgh 19, Pa.

ALCOA FIRST IN **ALUMINUM**

ALCOA ALUMINUM



Here's an important fact

GATES *Standard* VULCO ROPES are TODAY *Outwearing* any V-Belts Ever Built Before!

The simple fact that during the war our Army's tanks, tractors and self-propelled big guns required V-belts of a strength and durability never thought possible before is bringing substantial benefits to Gates V-belt users today. That is because Gates developed these greatly superior V-belts for our combat units—and here is why this fact is now important to YOU:--

with this simple reason behind it

Every improvement developed by Gates for U. S. Combat Units— and many later improvements, also—have been added, day by day, to the quality of the Standard Gates Vulco Ropes which have been delivered to you.

As a result, *long before the war was over,* you were getting in your Standard Gates Vulco Ropes a product built to far higher service standards than any V-belts ever built by anyone before the war.

And the improvement by no means ended there. Through continuing *specialized* research, the service qualities of these superior Gates Vulco Ropes have been still further improved as all of Gates facilities and energies have been returned to the service of industry.

These are the simple reasons why the standard Gates Vulco Ropes you are getting today are delivering far better service than any V-belts ever built before!

THE GATES RUBBER COMPANY
DENVER, Colorado
World's Largest Makers of V-Belts

All Gates V-Belts are Built With *The Patented* **CONCAVE SIDE**

Gates
THE MARK OF SPECIALIZED RESEARCH

466

GATES VULCO ROPE DRIVES

Engineering Offices and Jobber Stocks **IN ALL INDUSTRIAL CENTERS** of the U. S. and 71 Foreign Countries

Bunting Precision Bronze Bars are of SAE 660 Bronze, preferred by experienced design, production and maintenance engineers as the finest all-purpose bearing bronze.

The metallurgical structure of Bunting Bars is the responsibility of a competent metallurgical staff supervising foundry control and constantly checking chemical and structural correctness.

Bunting Precision Bronze Bars are carried in stock by hundreds of Bunting Stock-Carrying Distributors. There is a Bunting Distributor in your vicinity, ready and qualified to serve you. The Bunting Brass and Bronze Company, Toledo 9, Ohio.

41

Bunting

BRONZE BEARINGS ☆ BUSHINGS ☆ PRECISION BRONZE BARS

Whatever the job calls for

. . . it's in the Crane line

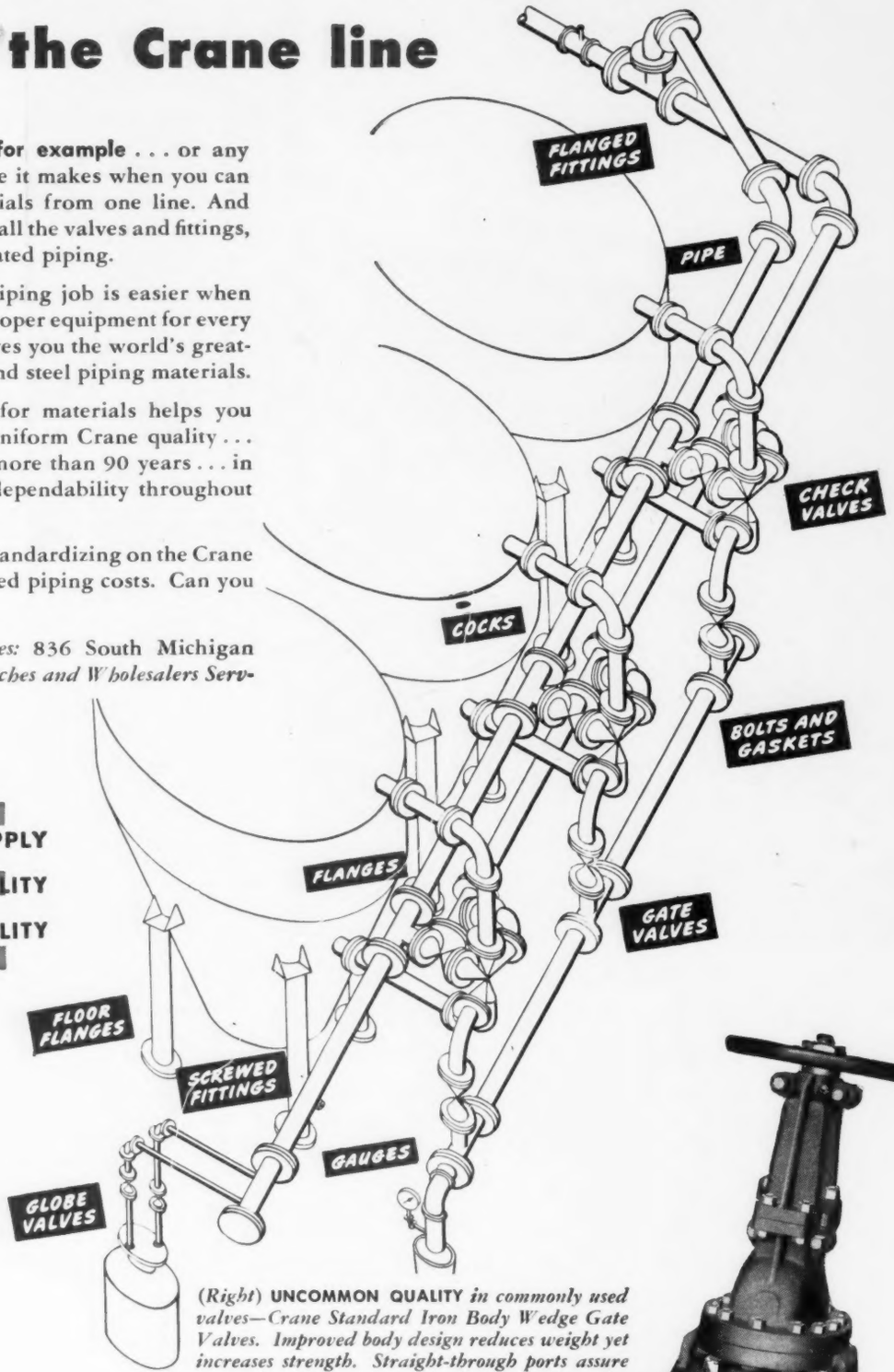
Take this filter installation for example . . . or any piping job. What a difference it makes when you can specify all the piping materials from one line. And when just one order gets you all the valves and fittings, pipe, accessories, and fabricated piping.

From start to finish, any piping job is easier when Crane is your partner. The proper equipment for every service is assured. Crane gives you the world's greatest selection of brass, iron, and steel piping materials.

Undivided responsibility for materials helps you get the best installations. Uniform Crane quality . . . the standard of quality for more than 90 years . . . in every part means uniform dependability throughout piping systems.

This 3-way advantage of standardizing on the Crane line is the sure way to reduced piping costs. Can you afford to overlook it?

CRANE CO., *General Offices:* 836 South Michigan Avenue, Chicago 5, Ill. *Branches and Wholesalers Serving All Industrial Areas.*



ONE
SOURCE OF SUPPLY
RESPONSIBILITY
STANDARD OF QUALITY

(*Right*) **UNCOMMON QUALITY** *in commonly used valves—Crane Standard Iron Body Wedge Gate Valves. Improved body design reduces weight yet increases strength. Straight-through ports assure streamlined flow. Every detail developed to give dependable, durable service. For steam pressures up to 125 pounds; 200 pounds cold. Patterns for every need. See Crane Catalog, page 101.*

EVERYTHING FROM . . .

VALVES • FITTINGS
PIPE • PLUMBING
HEATING • PUMPS

CRANE

FOR EVERY PIPING SYSTEM

The Most Beautiful Stocking in the World . . . Flawlessly knit, amazingly sheer—it's a fabric of wondrous beauty. TMW "Fixture Drawn"* Needles, an exclusive TMW Patent, assure greater profits through higher quality production of full-fashioned stockings. The "Fixture Drawn" Process holds the needles straight and true. It makes a superior needle. Keep your Knitting Machines young and effective with TMW Needles... *And remember: Regular Reneedling Pays! Let us put your needle bars in shape for faster, more accurate, more profitable knitting.*

* Reg. U. S. Pat. Off.

TEXTILE MACHINE WORKS • READING, PA.

"Keep some til more come."

SCOTCH PROVERB

Until production schedules will permit prompt delivery of the new high-precision READING Full-Fashioned Knitting Machine, our Engineers will do their utmost to help you keep your present equipment at highest efficiency. Let us tell you about our complete reconditioning service and what it means in terms of better fabrics and higher profits.

TEXTILE MACHINE WORKS • READING, PA.

Putting a finger on the trouble

Many firms, bothered by lagging production, have traced the trouble to moisture. For some processes there was too much in the air; for others too little. In both cases, the trouble was licked with the right kind of air conditioning —the Carrier kind.

Chemical plants, for example, have discovered that controlled humidity regulates the moisture in hygroscopic materials and permits minute amounts of these materials to be weighed accurately in any weather. Further, air conditioning quickly and easily removes the heat of reaction. Textile mills, on the other hand, need moisture. Air conditioning supplies the humidity to prevent yarn breakage and controls temperature to keep machinery adjustments at a minimum. In almost every type of plant, scientific, year-round air conditioning increases the comfort and efficiency of employees.

The air conditioning industry was founded by Carrier. Its engineers have been helping other industries boost output and improve quality for over 40 years. They know industrial processes. They have the answers to your questions about the *right kind* of air conditioning for your plant. Why not consult them about your needs? There's no obligation, of course. Carrier Corporation, Syracuse, New York.

Carrier

AIR CONDITIONING
REFRIGERATION
INDUSTRIAL HEATING

Today's Textiles ARE "BOUND TO GET THERE"

...WITH Acme Steelstrap

Doc *Steelstrap*
REG. U. S. PAT. OFF.

When strapped with Acme Steelstrap, textiles boxed, bundled or baled are locked in strong steel bands . . . secure against damage, pilferage and all every-day shipping hazards. In addition, labor, weight, dunnage and warehousing space are saved.

Acme Steelstrap Tools permit the speediest operation and are available for immediate delivery.

Our large field staff works exclusively for us and for you—we urge you to take advantage of our complimentary shipping service consultation.

NEW YORK 7 ATLANTA CHICAGO 8 LOS ANGELES 11

ACME STEEL COMPANY

ACME STEEL CO.
CHICAGO

Where other materials often fail...

PC FOAMGLAS INSULATION

helps control temperature, humidity and condensation—

permanently

ONE of the commonest complaints lodged against many insulating materials is this: that they lose insulating efficiency with the passage of time.

When you use PC Foamglas insulation in your mill, you need never worry about that hazard. For PC Foamglas has proved in all sorts of plants that it insulates not only effectively and economically, but *permanently*.

PC Foamglas is composed of millions of tiny air cells, sealed in glass. It is impervious to moisture, vapor, the fumes of most acids. It will not burn. It repels vermin. It will not swell, or shrink, or rot, or check. It thus is totally unaffected by elements which cause many insulating materials to deteriorate with age.

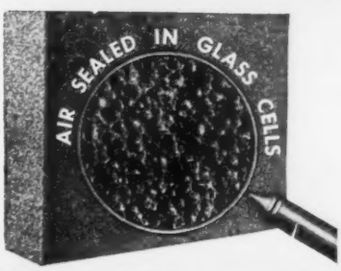
PC Foamglas insulation begins, the moment it is installed, to help you control temperatures, humidities and condensation in your mill. And it goes right on doing so, year after year, with the same degree of efficiency. Foamglas is the insulation that never grows old.

Why not act now to get complete information on this modern insulating material? Just check the booklets offered in the convenient coupon below. Send in the coupon. And your free copies of our helpful handbooks will be forwarded immediately, without obligation. Pittsburgh Corning Corporation, Room 143, 632 Duquesne Way, Pittsburgh 22, Pa.

THIS

WON'T HAPPEN HERE

You don't have to figure on repairs or replacements when you insulate your roofs with PC Foamglas. Even a break in the roofing felt that exposes the insulation to rain or melting snow will not cause PC Foamglas to flake, crack, rot, check, warp, swell or shrink. In addition, it forms such a firm, even base for roofing felt that such breaks rarely, if ever, occur.



IN THE THROW ROOM of this hosiery mill, temperature, humidity and condensation must be kept under rigid control. PC Foamglas has proved helpful in solving this and other similar insulating problems.

· Also makers of PC Glass Blocks ·

PC FOAMGLAS *Waterproof Fireproof* **INSULATION**

T. M. REG. U. S. PAT. OFF.

Pittsburgh Corning Corporation
Room 143, 632 Duquesne Way
Pittsburgh 22, Pa.

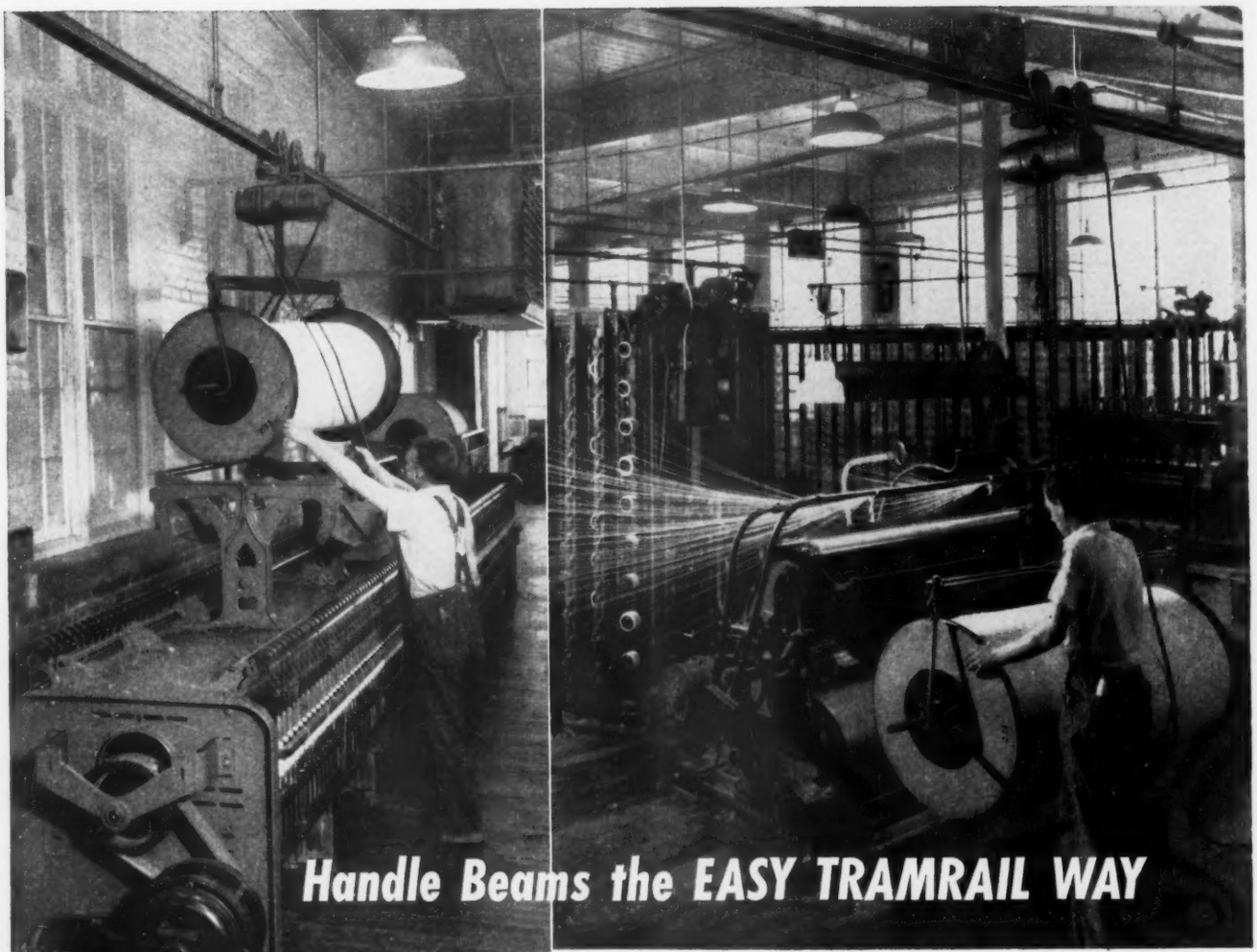
Please send me, without obligation, your free booklets on the use of PC Foamglas insulation for:

Roofs_____ Walls_____ Floors_____

Name_____

Address_____

City_____ State_____



Handle Beams the EASY TRAMRAIL WAY

You do not have to shut down the mill to install a simple Cleveland Tramrail system as illustrated. There is no expensive electrical work; only a few outlets are needed where hoist is to be used.

Heavy beams are easily handled with a simple Cleveland Tramrail overhead materials handling system. An electric hoist does the heavy lifting and the smooth-rolling carrier transports the beams by a light push of the hand.

The overhead system in this important South Carolina cotton mill not only serves the warpers and twisting frame, but is also used in the beam storage and for handling beams at the slashers.

Tramrail equipment has proven to be far more convenient than the hand-pushed floor dollies formerly used. It is especially desirable for lifting beams in and out of the machines and is an important factor in improving safety. It has brought about a considerable savings of time.

This Cleveland Tramrail system is surprisingly low in cost. Since it is designed for moderate service, no costly electrical equipment is employed. The hoist is provided with a cord and plug for connecting to power outlets that have been conveniently placed wherever use of the hoist is required.

GET THIS BOOK!

BOOKLET No. 2008. Packed with valuable information. Profusely illustrated. Write for free copy.

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
1185 EAST 283RD ST. WICKLIFFE, OHIO.

CLEVELAND TRAMRAIL

OVERHEAD MATERIALS HANDLING EQUIPMENT

You know detergents
—BUT DO YOU KNOW ORATOL?

• Oratol L-48 is well worth meeting! This Sulphonated Hydroxy Amide paste has unusual detergent and emulsifying properties and gives a heavy, continuous foam—points of real interest in any print wash, boil-off, or other dyehouse job.

You can use Oratol without hesitation in either slightly acid or alkaline solutions. It is unaffected by hard water or metallic salts, prevents the formation of lime soaps. It may be used alone as a full boil-off or, in lesser amounts, as a wash for printed fabrics. When used in conjunction with soap, it increases the stability of the soap and prevents the formation of soap curds with lime.

OTHER MEMBERS OF OUR FAMILY OF SYNTHETIC DETERGENTS:

ORATOL S POWDER
(Sulphated Amide)

SELLOGEN A S CONC
(Aryl alkyl sulfonate)

SELLOGEN C
(Higher Alcohol-Ester Compound)

EMULSIFIERS
L-32, L-34, L-45
(Non-ionic higher fatty acid ester)

WOLF BRAND PRODUCTS

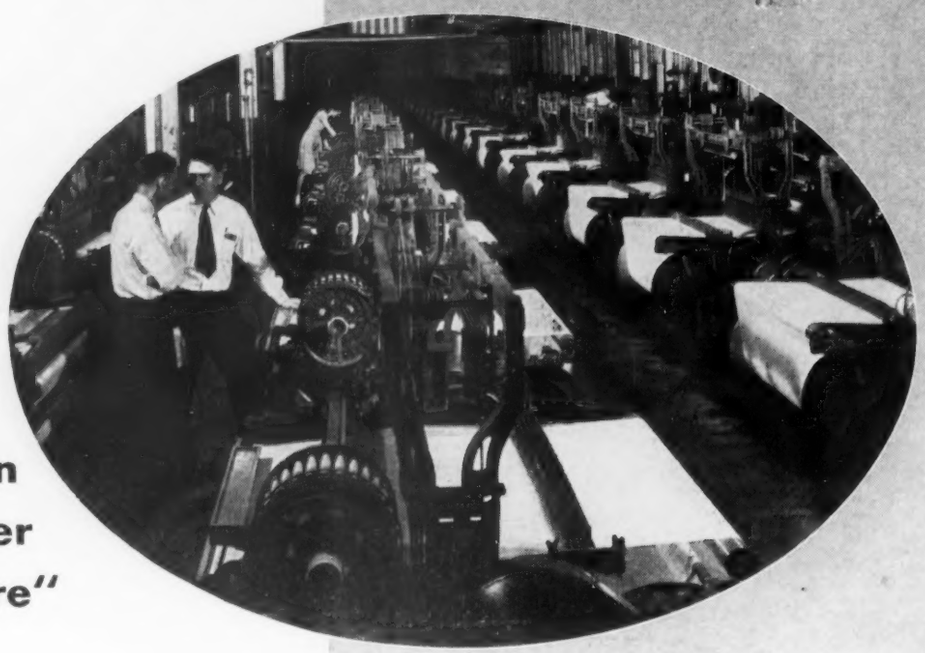
JACQUES WOLF & CO.
Chemicals **PASSAIC, N. J.**

OTHER PLANTS: CARLSTADT, N. J. • LOS ANGELES, CALIF.

WAREHOUSES: Providence, R. I., Philadelphia, Pa., Utica, N. Y., Chicago, Ill., Greenville, S. C., Chattanooga, Knoxville, Tenn.

LESS WEAR
GREATER EFFICIENCY
LOWER MAINTENANCE COSTS
REDUCED FIRE HAZARD

when the Gulf Lubrication Service Engineer is "in the picture"



This mill, like many others, gets tangible benefits with a Gulf Lubrication Service Engineer "in the picture." Here the Overseer of Weaving is shown consulting with a Gulf Engineer on loom lubrication.

HERE'S real help for you in your drive for greater yardage and lower costs: The co-operative counsel and practical recommendations of a Gulf Lubrication Service Engineer.

Gulf Service Engineers know how to reduce down time, how to extend periods between overhauls, and how to keep equipment up to full production by application of the right lubricants.

You get many benefits, too, when the Gulf Service Engineer is "in the picture" in your mill. He can help you cut maintenance and power costs, reduce fire hazard, and lengthen the life of your machines.

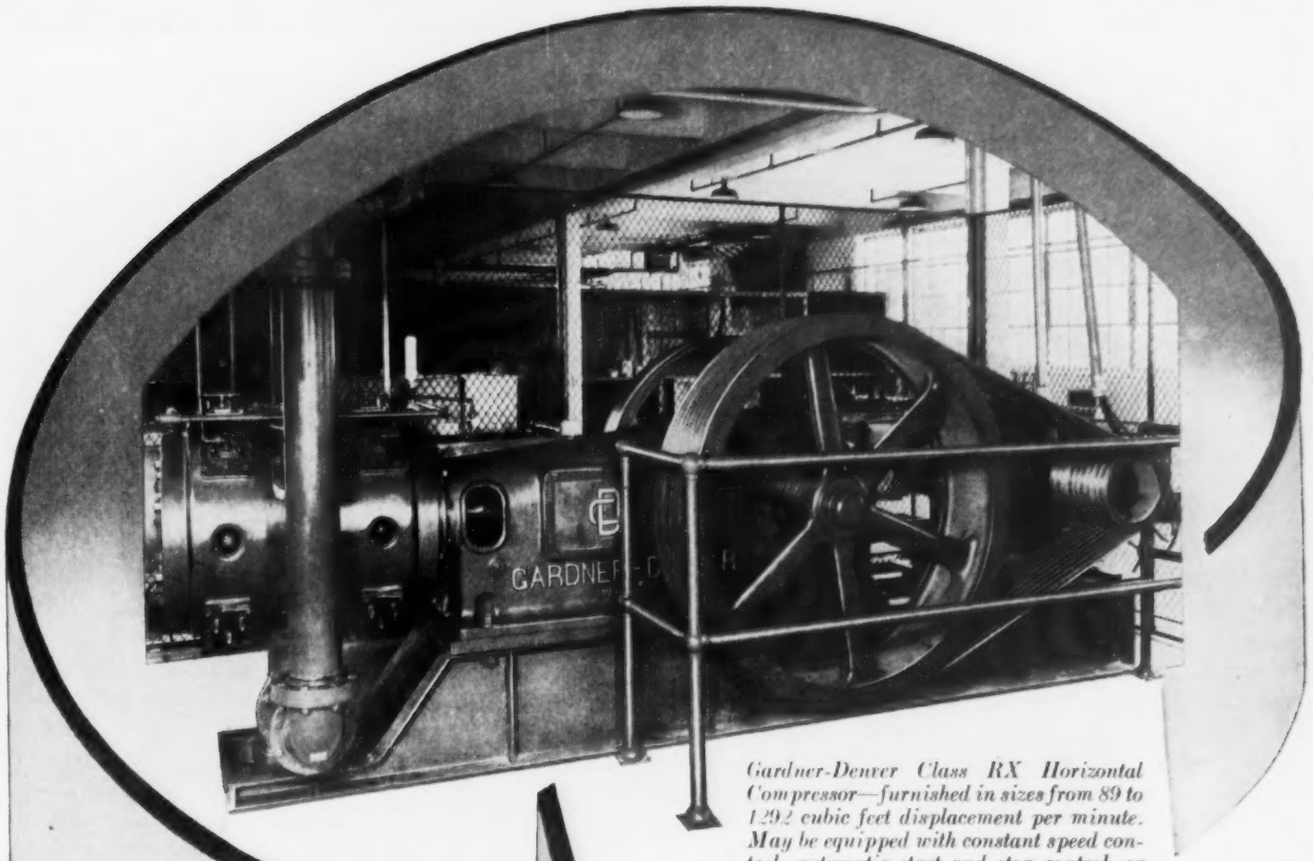
Call in a Gulf Lubrication Service Engineer today and let his knowledge and experience assist you in solving your lubrication and maintenance problems. Write, wire, or phone your nearest Gulf office.

GULF INDUSTRIAL LUBRICATION

GULF OIL CORPORATION · GULF REFINING COMPANY

Division Sales Offices:

Boston · New York · Philadelphia · Pittsburgh · Atlanta
New Orleans · Houston · Louisville · Toledo



Gardner-Denver Class RX Horizontal Compressor—furnished in sizes from 89 to 1292 cubic feet displacement per minute. May be equipped with constant speed control, automatic start and stop control, or duomatic control.

Protect Your Production *in these* 5 *ways*

★ **DUSTPROOF**—*sturdy main frame is completely enclosed—cover plates are bolted on with oil-tight, dust-tight gasket joints.*

★ **ROLLER BEARINGS**—*crankshaft mounted on roller bearings, is tapered at both ends to fit wheels—impossible to throw wheels out of line by improperly fitted key.*

★ **BETTER VALVES**—*famous Gardner-Denver Duo-Plate valves that stay tight—simple, durable, quiet.*

★ **THOROUGH JACKETING**—*special design permits complete water-jacketing of all valves, air passages and cylinder heads to reduce the heat of compression—increasing efficiency and cutting horsepower.*

★ **EXTRA LUBRICATION**—*in addition to a flood and pressure system, an integral oil reservoir furnishes an extra supply of lubricant for crosshead bearings.*

Gardner-Denver Company, Quincy, Illinois; Atlanta, Ga.; Birmingham, Ala.; Boston, Mass.; Hazleton, Pa.; Knoxville, Tenn.; Washington, D. C.; New York, N. Y.; Philadelphia, Pa.; Pittsburgh, Pa.

GARDNER-DENVER *Since 1859*

"A desizing enzyme that's stable at 180° ?
. . . I want to hear more about that!"

THE SERVICE THAT BUILT OUR BUSINESS CAN HELP YOURS

Our business has been built largely on the practical help we have been able to give our customers, right in their own plants, in adapting Rohm & Haas products to their needs.

Our representatives are men with technical training and practical experience in the use of industrial chemicals. Call on a member of our textile chemicals department when you need assistance in choosing or using . . .

Fine Chemicals For Fine Textiles

OVER the years mill men have found it pays to talk with our representatives.

Right now one of the things they're talking about is RHOZYME DX, new desizing enzyme that really holds up under heat.

With RHOZYME DX, enzyme activity is unaffected when solutions are held at 160° F. for as long as four hours.

In fact, for rapid processing in jigs and kettles, temperatures of 170° F. to 180° F. may be used with complete safety.

Let us know if you would be interested in a call from one of our men to tell you more about this history-making new desizing enzyme . . . . . **RHOZYME DX**

RHOZYME *is a trade-mark, Reg. U. S. Pat. Off.*

Represented in Canada by Rohm & Haas Company of Canada, Ltd., Toronto; and in South America by Cia. Rohm y Haas, S. R. L., Carlos Pellegrini 331, Buenos Aires, Argentina, and agents in principal South American cities

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Manufacturers of Chemicals for the Textile, Leather and other Industries . . . Plastics . . . Synthetic Insecticides . . . Fungicides . . . Enzymes

Congress has acted—and along these lines—since this editorial was written. If the President signs the legislation, we have taken one step forward. If he vetoes it, the voters must resolve a conflict between two branches of their government.

THE LABOR CRISIS
—*it's up to Congress*

IT HAS remained for John L. Lewis to demonstrate conclusively that, under the sponsorship of the federal government, the power of organized labor has been built up to a point where it can be used to paralyze the economic life of the nation. Therefore, in the elemental interest of self-preservation, the first order of the day is to cut down the power of organized labor to a point where irresponsible leaders no longer have the power to use it to cut down the country.

This will prove an exceedingly complicated job. The federal government, over a dozen years, has developed and buttressed the power of organized labor by many separate steps. They are interlaced in a pattern which cannot easily be unravelled.

Cutting down the power of organized labor to proper proportions will be an operation almost as delicate as brain surgery. To be successful it must impair no basic American political or economic right. It must leave intact the right of workers to organize and bargain collectively through representatives of their own choosing. It must leave intact the right to strike. But it must disassociate from the exercise of these rights opportunities for devastating abuse of the public welfare such as those demonstrated by Mr. Lewis. A meat axe is not the instrument for this operation.

Because of the complexity and delicacy of the operation to be performed it would be helpful if it could be carried out in a tranquil atmosphere. The urgency of the problem is such, however, that no time can be lost in getting at it.

Guiding Principles

However, the dangers that haste or heat will lead to serious blunders can be largely eliminated if the process of bringing the power of organized labor back within safe and reasonable bounds is governed by principles to which all fair minded people can fully subscribe.

The most important of these principles is that it is an abuse of public authority to extend special privileges to organized labor.

When in 1935 Congress passed the Wagner Labor Relations Act, one of the great buttresses of the power of organized labor, it was upon the explicit theory that organized labor was weak and needed coddling by the federal government if it were to survive, let alone grow big and strong. In the policy section of that act it was stated that "the inequality of bargaining power between employees who do not possess full freedom of association or actual liberty of contract, and employers who are organized in the corporate or other forms of ownership association substantially burdens and affects the flow of commerce . . . "

Regardless of whether or not that was a correct reflection of the situation in 1935, it bears no relation to the situation today. Under the continuous sponsorship of the federal government, the power and bulk of organized labor has waxed until today it is preposterous to regard it as the weak sister in its bargaining with employers. If, after being continuously demonstrated since V-J Day, the proposition that the pendulum of organized power has swung too far over on the side of organized labor needed any final and clinching demonstration, John L. Lewis provided it.

Changes in the Law

Translation of the principle that organized labor is no longer a weakling, requiring a diet of special privileges, into specific legislative enactments is a detailed technical operation beyond the scope of this statement. It is possible, however, to indicate some of the general lines it should follow. Here they are:

1. The duty to bargain collectively, now imposed upon employers by the Wagner Act, should also be imposed upon the leaders of organized labor who are now under no legal compulsion to bargain.

For well over a month Mr. Lewis made a complete mockery of the process of collective bargaining by refusing even to state his demands until the coal operators had approved "in principle" a plan for a miners' "health and welfare" fund which he fancied. In the meantime the country was plunged into an ever deepening crisis.

2. Unions, as well as employers, should be made liable to suit for damages for breaking their collective bargaining agreements.

A degree of responsibility commensurate with their age and power requires that unions be liable, to the extent of union funds but not the funds of individual members, for carrying out their agreements. To have it otherwise is to hold that a collective bargaining agreement is, by defi-

nition, a phoney agreement so far as the union is concerned. Outlaw strikes are the fruit of this lop-sided arrangement.

3. Employers should be given more discretion, in reinstating employees who have gone on strike than is now permitted by the Wagner Act.

The Wagner Act largely eliminates the risks involved in striking because of the requirements it imposes upon employers to take workers back when they have decided to return to work. These requirements make it virtually impossible for the employer to replace workers even if they are engaged in the most unjustifiable of strikes. At the least workers who have smashed up property and stirred up violence in the course of a strike should have no rights under the Wagner Act. How much further the Wagner Act straitjacket should be loosened at this point should be carefully explored, and excesses encouraged by the Act should be removed.

4. The wedge which the National Labor Relations Board has driven into the orderly conduct of American industry by holding that foremen are covered by the Wagner Act should be eliminated.

The issue involved here is continuously mislabelled and confused as that of the right of foremen to organize. There is no question of the right of foremen to organize any kind of a legal organization they desire. That is their right as American citizens. The issue is whether or not the special privileges accorded by the Wagner Act, which in some circumstances has been so construed as even to prevent employers from talking with their workers, should be extended to foremen who, if American industry is to have a chance to do its duty effectively, must represent management with full loyalty and responsibility.

A member of John L. Lewis' United Mine Workers takes an oath which provides, in part, "that I will not reveal to any employer or boss the name of anyone a member of our union" and will "defend on all occasions and to the extent of my ability the members of our organization." Mr. Lewis insists that the coal operators contract to deal with foremen to be organized in a union where they will take that oath, and where their activities will be separated from the influence of employers by the barriers imposed by the Wagner Act. Such an arrangement undercuts orderly management of American industry.

5. The exemption of labor unions from the federal anti-trust laws, provided when organized labor was presumed to be weak, should be modified to take account of its vastly increased strength, and the use of this strength to destroy business enterprise and create monopoly.

As matters stand unions can run employers completely out of business by secondary boycotts and run fellow workers out of jobs in the process. An Ohio manufacturer, working with a government-certified C. I. O. union, is put out of business because A. F. of L. workers refuse to handle his products. Still the government, this time in the person of the United States Supreme Court, says that actions of this sort are above the law because Congress exempted unions from the federal anti-trust laws.

To eliminate one of the most devastating forms of restraint of trade, this exemption should be cut down forthwith by subjecting unions imposing secondary boycotts to the same penalties under the federal anti-trust laws as those to which employers doing the same thing are subjected. And the question of further narrowing the obsolete exemption of unions from the federal anti-trust laws should be fully explored.

6. The levying of special sales taxes for the exclusive benefit of unions should be prohibited by law.

As a matter of good government the right to levy consumption taxes should be reserved to the public authorities and used strictly for public purposes. As a matter of good economics, payments to workers or their organizations should be included in the payroll where they can be properly counted as part of the cost of production.

Equality Before the Law

When everything that can conceivably be accomplished by legislation has been accomplished there is no reason to believe that an ideal or even a surely workable system of industrial relations will have been devised. Many of the mainsprings of such a system lie deep in the hearts of men and far beyond the reach of legislation. There is no chance, however, of having such a system, or even a defensible system of democratic government until special privileges which tip the scales of power far on the side of organized labor are withdrawn and there is some measure of equality for employers and organized labor before the law. Though it is hard to believe it at the moment the country may come to be grateful to John L. Lewis for driving that lesson home so ruthlessly.

President, McGraw-Hill Publishing Company, Inc.

JUNE, 1946 · VOL. 96 · NO. 6

TEXTILE WORLD

LET'S KNOT—

and Let's Do It the Right Way

HIGHLIGHTS: *Regular weaver's knot can be tied on loom and pulled tight by special method—Conventional weaver's knot will not hold nylon yarns — The double-loop weaver's knot is best for slippery yarns — Velvet knot is quickly tied and keeps yarn cleaner — Special tying of weaver's knot suitable for short ends, such as transfer tails — So called "chicken-head" knots suitable where bulkiness is unimportant.*

THE IMPORTANCE of correctly tied knots is not underestimated by mill men—as evidenced by continuing requests received by TEXTILE WORLD for copies of E. D. Fowle's article "The Knot Nobody Knows" as printed in the May 21, 1927, issue. Yet it appears from letters received that more than 75% of the employees in the industry still do not differentiate between the better and poorer methods of tying the conventional weaver's knot.

On the next page is shown the steps in properly tying a weaver's knot much as they appeared in the 1927 article, and on the pages which follow are given preferred ways of tying knots including the so-called double weaver's knot, the "velvet" method of tying the weaver's knot, a creeler's knot, and a way to tie a weaver's knot even though one end available is extremely short or the tied ends must be pulled taut.

With the advent of nylon, it was soon learned that the conventional weaver's knot slipped; and, accordingly, a double weaver's knot was developed. In the May, 1944, issue of TEXTILE WORLD, page 138, one method of tying this knot was given; but since then a somewhat better form has been found (first suggested to TEXTILE WORLD by Francisco Monsech, Jr., of San Luis Potosi, Mexico). As will be seen by the illustrations further on, the double weaver's knot is probably misnamed; it is a single weaver's knot which is held by a double loop. For a true description of the knot, therefore, it should be called the double-loop weaver's knot. (Its nautical name is the double sheet bend.)

VELVET KNOT. The "velvet" knot is merely a weaver's knot tied in a special way. It has found much use on rayons because the method of tying leaves the yarn cleaner than does the conventional knot. There is also less danger of tying the poorer form of the weaver's knot if the "velvet" method of tying is used.

Many mill men disregard the fact that a weaver's knot can be tied so that the two short ends lie on the same side of the knot or on opposite sides. Short ends lying on opposite sides is preferred, as the ends will not be so likely to hang on knitting needles, loom heddles, reeds, or other equipment.

Even with the "double" weaver's knot, the short ends can be made to lie on opposite sides rather than on the same side. The method shown in the following description differs from that given in the May, 1944, issue of TEXTILE WORLD in that the short ends will lie on opposite sides.

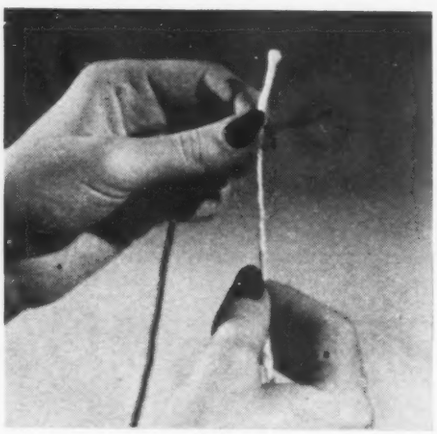
The short-end transfer knot shown has proved its usefulness whenever one of the two ends to be tied is extremely short and a weaver's knot is wanted. The

method is extremely fast, and the knot can be tied when one end is as short as a half inch, provided that the other is long. The only real trick in tying the weaver's knot by this method is in pulling it tight properly, which can be learned by a little experimentation after following the steps shown for this knot.

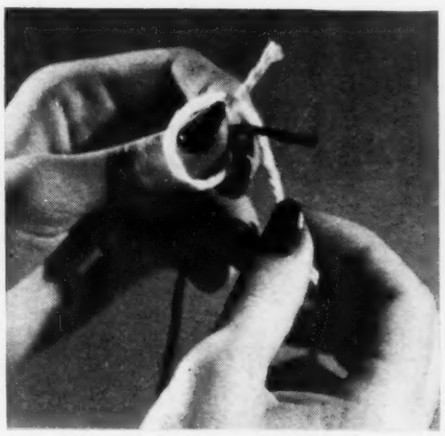
This knot can also be used by weavers when drawing in broken ends by merely pulling the "short" end through the loop tightly before tightening the knot.

KNOTTERS. Mechanical knotters can be used for tying a type of weaver's knot and the "chicken-head" or spooler's knot, and their use is often recommended when an operator has many knots to tie. But there

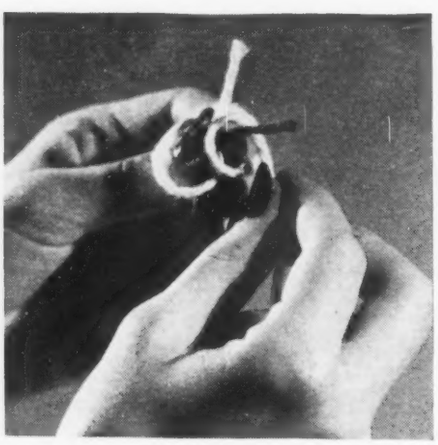
CONVENTIONAL TYING OF WEAVER'S KNOT



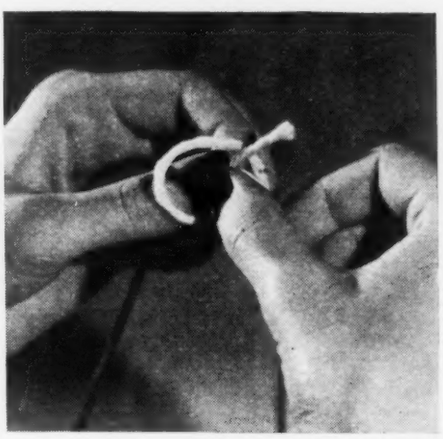
1 *Cross the two ends, making certain that the end from the left hand is in front of the end from the right hand.*



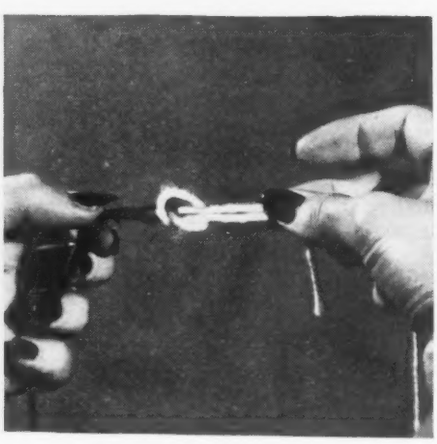
2 *Swing the yarn in the right hand over the left thumb and back of the two ends.*



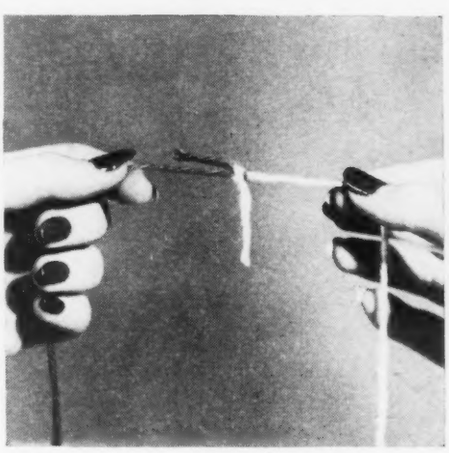
3 *Swing the same yarn around only the end to the right (which is the end of the yarn held in the left hand).*



4 *Push the end on the right with the right thumb over the loop on the right (which is around the one end only) and through the loop on the left (which is around both ends).*



5 *Now clamp the left thumb on the yarn in the left hand and pull the knot tight.*



6 *Completed knot should have short ends on opposite sides of the knot. (Nautical name for this knot is the sheet bend.)*

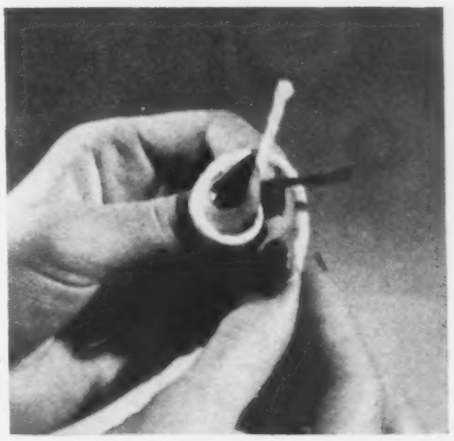
still are many instances in which operators need to know how to tie knots by hand.

No mention has been made about clipping knot tails, principally because the practice varies. In some instances, such as with creeler's knots, the tails need not be clipped. But it should be said that whenever tails need to be short, as is the case in the majority of instances, the tails should be clipped by scissors or other mechanical means and should not be broken off by hand.

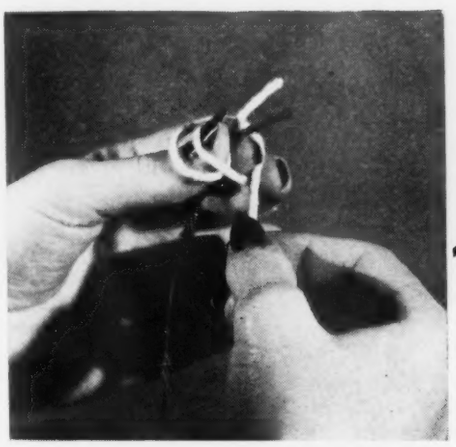
In the accompanying illustrations the ends being tied are shown in different colors merely for clarity; obviously in practice the operative would seldom be piecing up such ends.

TYING "DOUBLE" WEAVER'S KNOT

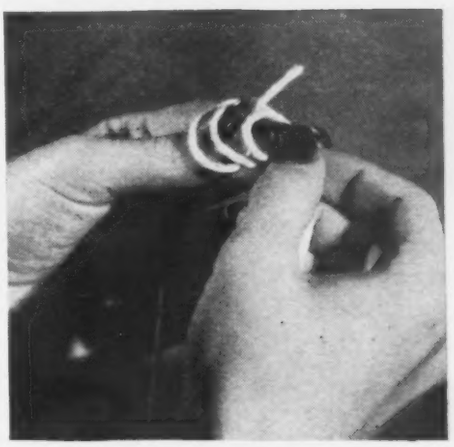
1 *Cross the two ends, making certain that the end from the left hand is in front of the end from the right hand. (First two steps are same as for conventional weaver's knot.)*



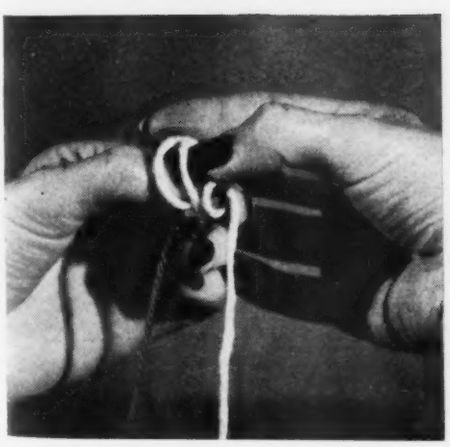
2 *Swing the yarn in the right hand over the left thumb and back of the two ends.*



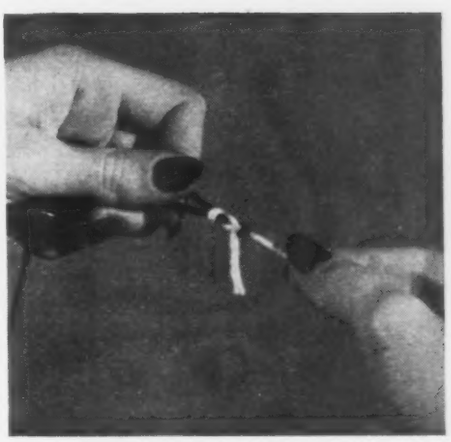
3 *Swing the yarn in the right hand over the left thumb and back of the two ends a second time, with the second loop to the right of the first loop.*



4 *Swing the yarn in the right hand around the single short end on the right.*

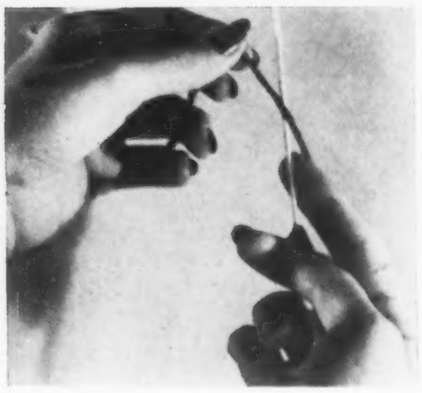


5 *Push the short end on the right over the last loop which was just swung around it and through the two loops on the left that were swung around both ends.*

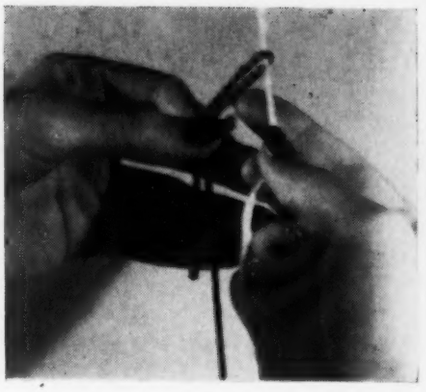


6 *Clamp the long and short ends now on the left between the left thumb and forefinger and pull the knot tight.*

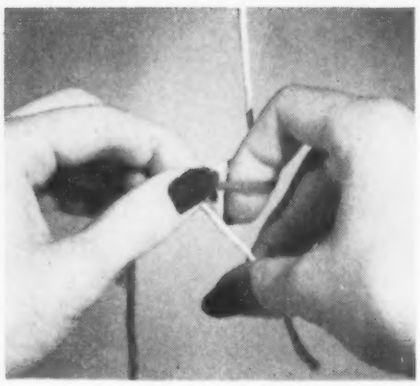
"VELVET" TYING OF WEAVER'S KNOT



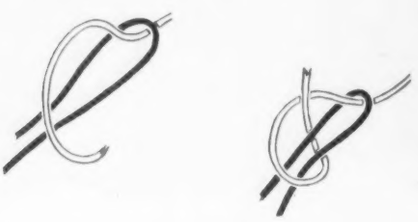
1 *Velvet method of tying weaver's knot assumes one fixed end, generally above a free end. Grasp such a fixed end with the right hand while the left hand crosses over the right to grasp the loose end. Cross the end in the left hand over that in the right.*

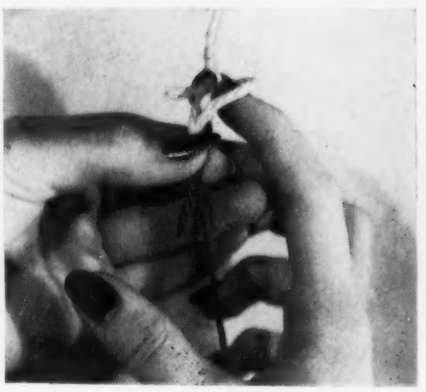


2 *With the left thumb and forefinger, make a loop with the yarn in the left hand around the yarn in the right hand which should be held by the right thumb and middle finger.*

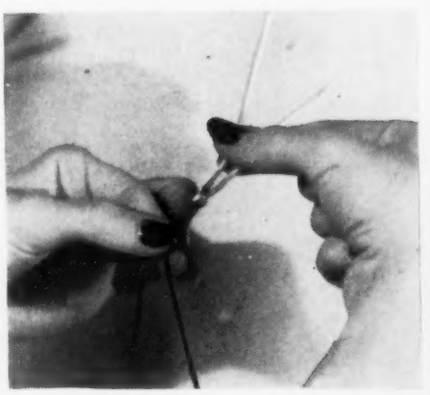


3 *Put the right forefinger back of the yarn held in the right hand but in front of the loop formed by the left hand; and with the left thumb and forefinger, grasp the yarn that is seen between the right thumb and forefinger..*

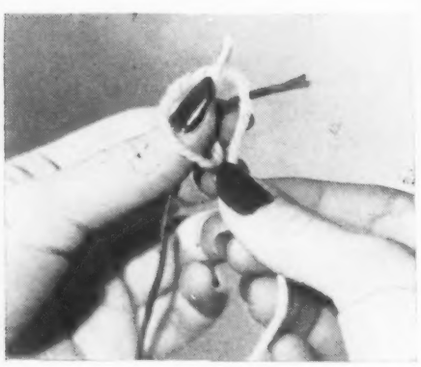




4 *Bend the right forefinger in front of the yarn held by the right thumb and middle finger and pull the short end back through the loop which has been formed.*



5 *Pull long and short ends tight by thumbs and forefingers and knot is tied. Actually, this method of tying is quick and keeps yarn cleaner than does the conventional tying.*



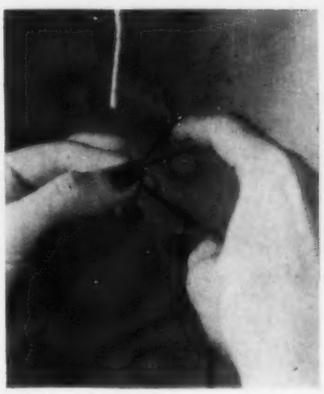
Less desirable form of weaver's knot.

METHOD NOT RECOMMENDED

THIS ALTERNATE METHOD shown at left for forming a conventional weaver's knot replaces the steps shown in Figs. 2 and 3 of the conventional tying of the weaver's knot. After the ends are crossed, the yarn in the right hand is swung back of the tip on the left and in front of the tip on the right. Step shown in Fig. 4 (conventional tying) follows.

The alternative method is not recommended, even though it may be thought to be slightly faster, since two (circular) motions are combined in one (forward and back) motion. The chief objection is that in the completed knot both short ends will be found to be lying in the same side of the knot and are more likely to catch in knitting needles, heddles, reeds, or other parts of equipment. A surprising number of mill men continue to disregard this difference in the final outcome of tying a weaver's knot.

TYING SHORT-END TRANSFER KNOT (WEAVER'S)



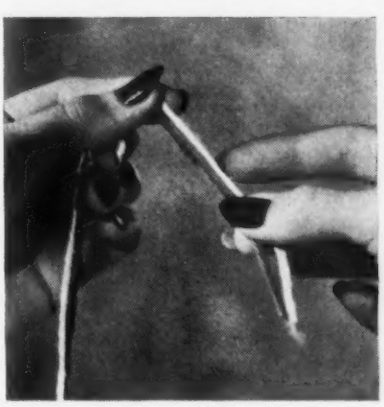
1 *This knot is designed for use when one end to be tied is very short, yet a weaver's knot is wanted, or when yarn must be pulled tight, as must warp ends in weaving. Pick up the tip of the long end in the left hand; farther along the long end grasp it between the right thumb and middle finger. Swing tip in the left hand around right forefinger, and with left thumb and forefinger grasp yarn that lies between right thumb and forefinger, being sure that long part of yarn lies on top of tip.*

2 *Swing right forefinger down to pass in front of yarn held by thumb and middle finger; and then with forefinger, pull the long yarn through the loop which had been made around the forefinger. Stick right thumb through loop just formed in order to grasp short end to be tied.*

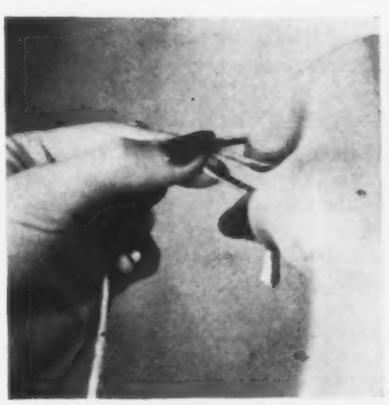
3 *Hold short end with right thumb and forefinger while right thumb and middle finger holds the long end. The tip of the long end is held by the left hand. (Yarn held by right hand can be pulled through tightly when this knot is used by weaver on warp ends.)*

4 *Knot is pulled tight by the left hand pulling on the tip of the long end while the right hand pulls on both the tip of short end and the long part of the long end. Properly pulling the knot tight is one of the tricks in tying by this method.*

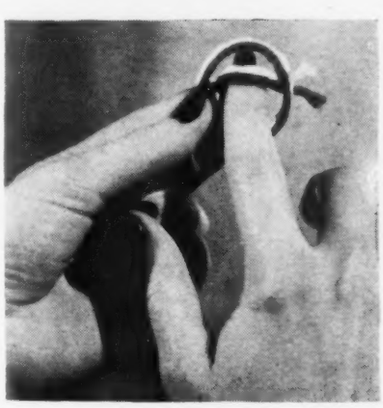
FAST TYING OF CREELER'S KNOT



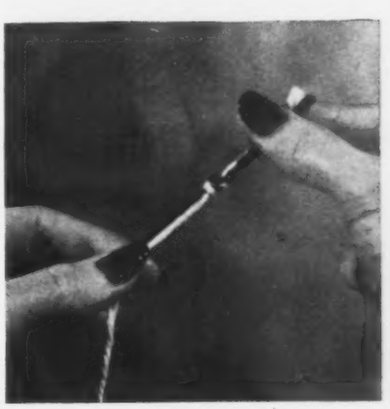
1 *Grasp tips of both ends with the right thumb and middle finger while holding yarns further back between the left thumb and forefinger.*



2 *Form a loop around the right forefinger while crossing the yarn near the tips in front of the yarn held between the left thumb and forefinger. Hold yarn at the cross with the left thumb and forefinger.*



3 *Swing right forefinger in front of the tips of yarn held by the right thumb and middle finger. Hook the short ends with the right forefinger through the loop formed around the right forefinger.*



4 *Pull the knot tight. Note the bulk of the knot—it is useful only where its bulk is not objectionable. This knot can be tied with tails short enough so that they often are not clipped.*

TERRY EFFECT, Fancy to Eye, Is Simple to Produce

THE WEAVE used today in the manufacture of terry cloth is in all respects exactly as introduced by the firm of W. M. Christy, of Manchester, England, more than 100 years ago. Interestingly enough, its first introduction was the result of a technical failure. The firm had attempted to reproduce hand-loomed Turkish carpets on the simple power looms of the mid-1800's. The effect was not a success, but in the process the experimenters took to wiping their hands on the waste fabric, according to the story, and found it an ideal towelling. They made a few changes in the type of yarns used and launched the product as a "Turkish Towel." Its acceptance by the Royal Family enabled the firm to label its product the "Royal Turkish Towel," a name still in use by this firm. The word terry itself comes from the French verb "tirer," meaning "to draw," which applies because of the weaving technique.

HIGHLIGHTS: *Diagrams show principles which produce weave—Two warps used, one for ground and other for pile—Tensions, intersections, and delayed beat-up produce the loop pile—Weave discovered 100 years ago in attempt to reproduce Turkish carpets.*

By T. HARGREAVES

ALTHOUGH THE MACHINERY and methods used in the production of terry cloth have been improved constantly since the introduction of the fabric more than 100 years ago, the weave remains fundamentally the same.

A loom fitted with four-leaf cams can weave this cloth. Two of the ends (ground) are tightly woven, while an adjoining two ends (pile) are slackly woven so as to form loops on the face and back of the cloth. Fig. 1 shows the fabric in section along the warp.

Examination discloses that each pile yarn and each ground yarn is a simple 2 up, 1 down or 2 down, 1 up weave, but the crossing from top to bottom or bottom to top is at a different time for the pile and ground threads. The weave is complete on four warp ends—two pile and two ground—and on three filling picks.

Analyzing the weave still further, commencing at the center of a loop, it is seen that

D weaves 1 up, 1 down, 1 up and produces pile on top;

E weaves 1 down, 1 up, 1 down and produces pile underneath;

B weaves 2 up, 1 down and forms the upper thread of the ground weave;

C weaves 2 down, 1 up and forms the bottom thread of the ground warp.

The weave design is shown at Fig. 2.

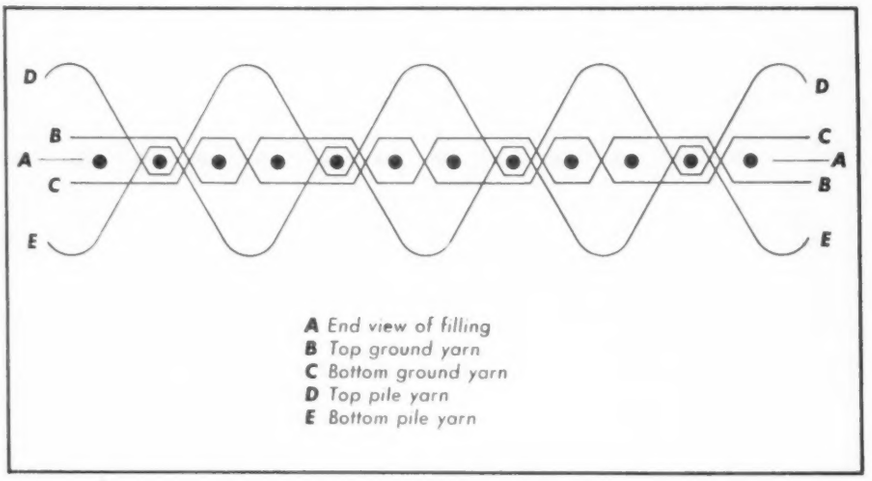
DRAFTING. Two warps are used in the loom. The bottom warp beam, resting in the usual brackets of the loom, is the ground warp. The pile warp is placed in the loom immediately above the ground warp at about the height of a man's shoulder. The ends from these two warps are entered in the heddles and reed as shown in the harness draft in Fig. 2.

Mounted and woven in the loom, with the correct cam lifts, however, this still would not produce the typical terry loops, but instead would produce a broken-twill type of cloth. The loom needs further modification:

1. The ground warp should be heavily weighted—even more than is customary in an ordinary one-warp weave;

2. The pile warp should be lightly weighted, just sufficiently to prevent free turning;

3. The picks should not be beaten up as they are inserted, but should be



A *End view of filling*
B *Top ground yarn*
C *Bottom ground yarn*
D *Top pile yarn*
E *Bottom pile yarn*

Fig. 1

beaten up in the special manner described below.

First Pick—

First and third heddles up
Second and fourth heddles down

Here the reed, which is in a special movable pocket, is held back about half an inch at the beat-up point, so that first pick of filling is beaten up to within ½ in. of the fell of the cloth.

Second Pick—

Second and third heddles up
First and fourth heddles down

Here, the reed again is held back the same distance as for the first pick. There now are two picks each about ½ in. from the fell of the cloth.

Third Pick—

First and fourth heddles up
Second and fourth heddles down

After this third pick of filling has been inserted and the time for beating it up has arrived, the reed is locked in the forward or customary position and the three picks are beaten up together to the fell of the cloth. As they are beaten up, they draw the lightly weighted pile threads forward and so form a loop. The ground threads, being heavily weighted, allow the three picks to slide along them and so form a tight ground or foundation weave.

WEAVE ITSELF IS KEY. The fact that the pile warp is lightly weighted and the ground warp heavily weighted is not the entire reason why the loops are formed. The weighting is only to assist the loop formation. The weave itself plays the most important role.

Examine the crossing of the pile and ground threads with the three picks that have been inserted but not yet beaten up to the fell of the cloth (See Figs. 3 and 4). It will be seen that on the first pick the top pile end was lifted, on the second pick the top pile end was down, and on the third pick the top pile end was again lifted. Thus this top pile yarn had two intersections with the three picks which locked the pile yarn with the weft. This locking of the pile ends, assisted by light weighting, causes the pile yarn to be pushed forward as the three picks are beaten up, and so a loop is formed between the cloth already woven and the three latest picks. The bottom pile, in the reverse manner, also is locked and a loop formed.

The ground yarns are not so interlocked, however. On the first pick, the top ground end was lifted, on the second pick it was lifted again, and on the third pick it was down. Thus it had only one intersection with the three picks and, assisted by the heavy weighting of the ground thread, the three picks slide forward easily without displacing the ground warp. The bottom ground end, in the reverse manner, also was not interlocked.

Figs. 2 and 4 illustrate these intersections and show the formation of the terry loops.

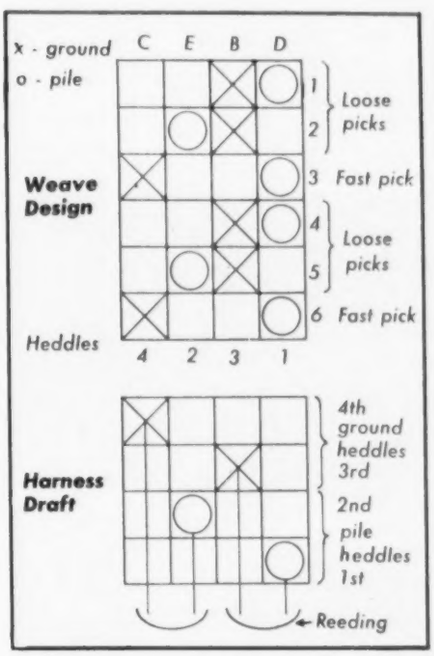


Fig. 2

LOOPS ARE FORCED. The principle of forming the loops still does not account for one of the loops going to the top and one to the bottom. If end No. 1 (pile on top) is examined in Fig. 4, it will be seen that this yarn is OVER the last of the three picks previously inserted and also is OVER the first of the three picks to be beaten up. Therefore it is over the two picks in the space made by holding the reed back, and so is forced upward as the three picks are beaten forward. End No. 3 (pile underneath), being woven in reverse fashion, is UNDER the two picks and naturally will be forced down to form the pile loop underneath.

Thus for designing purposes:

	1	2	3
Terry on top weaves	up	down	up
Terry underneath weaves	down	up	down
Top ground yarn weaves	up	up	down
Bottom ground yarn weaves	down	down	up

The reed is held back for two picks, and then three picks are beaten up together. The first two picks while reed is held back are called loose picks and the third pick is called the fast pick. With this foundation terry weave (as shown in Fig. 2) as a basis it is possible to design fancy patterns.

A subsequent issue will carry the author's description of the mechanism that holds back the reed for two picks and sends it forward for the third pick.

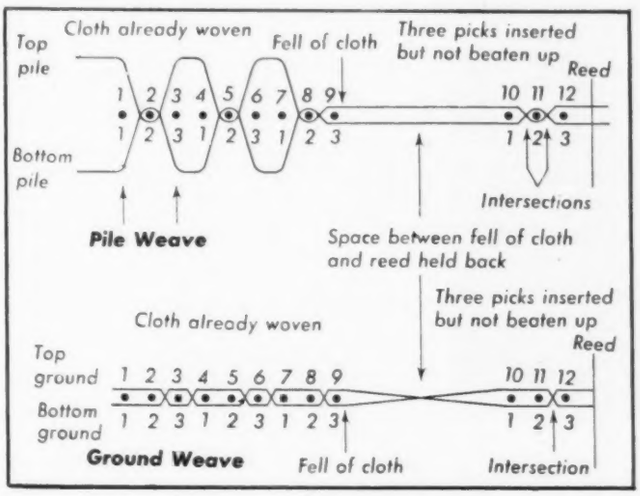

Top pile
Cloth already woven
Fell of cloth
Three picks inserted but not beaten up
Reed
1 2 3 4 5 6 7 8 9
10 11 12
Bottom pile
1 2 3 1 2 3 1 2 3
1 2 3
Intersections
Pile Weave
Space between fell of cloth and reed held back
Three picks inserted but not beaten up
Cloth already woven
Reed
Top ground
Bottom ground
1 2 3 4 5 6 7 8 9
10 11 12
1 2 3 1 2 3 1 2 3
1 2 3
Ground Weave
Fell of cloth
Intersection

Fig. 3

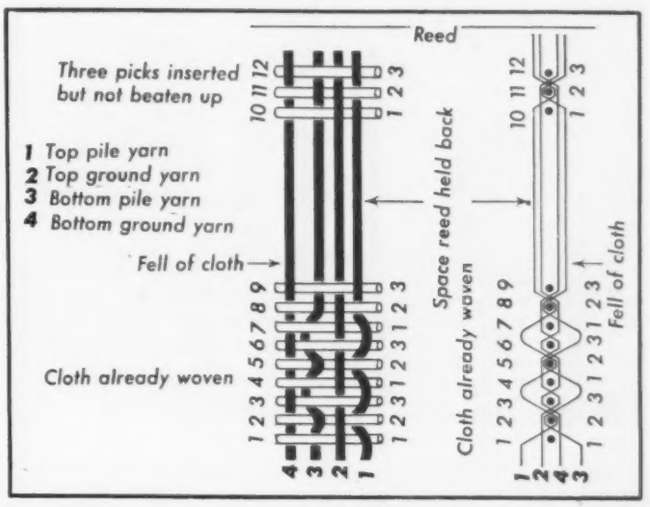

Reed
Three picks inserted but not beaten up
1 Top pile yarn
2 Top ground yarn
3 Bottom pile yarn
4 Bottom ground yarn
Fell of cloth
Space reed held back
Cloth already woven
10 11 12
1 2 3
1 2 3 4 5 6 7 8 9
1 2 3 1 2 3 1 2 3
4 3 2 1
1 2 4 3

Fig. 4

Mill Gives Operating Hints on New CIRCULAR-KNIT MACHINES

HIGHLIGHTS: *Supreme's new MJ model circular machine, installed at Elbert Mills, Inc., produces 32 lb. per hr. of cotton jersey—Mill uses 64 feeds and yarn counts from 18/1 to 60/2—Official gives details of maintenance, cleaning, and oiling schedules.*

By GEORGE J. SPEIZMAN, *General Manager, Elbert Mills, Inc.*

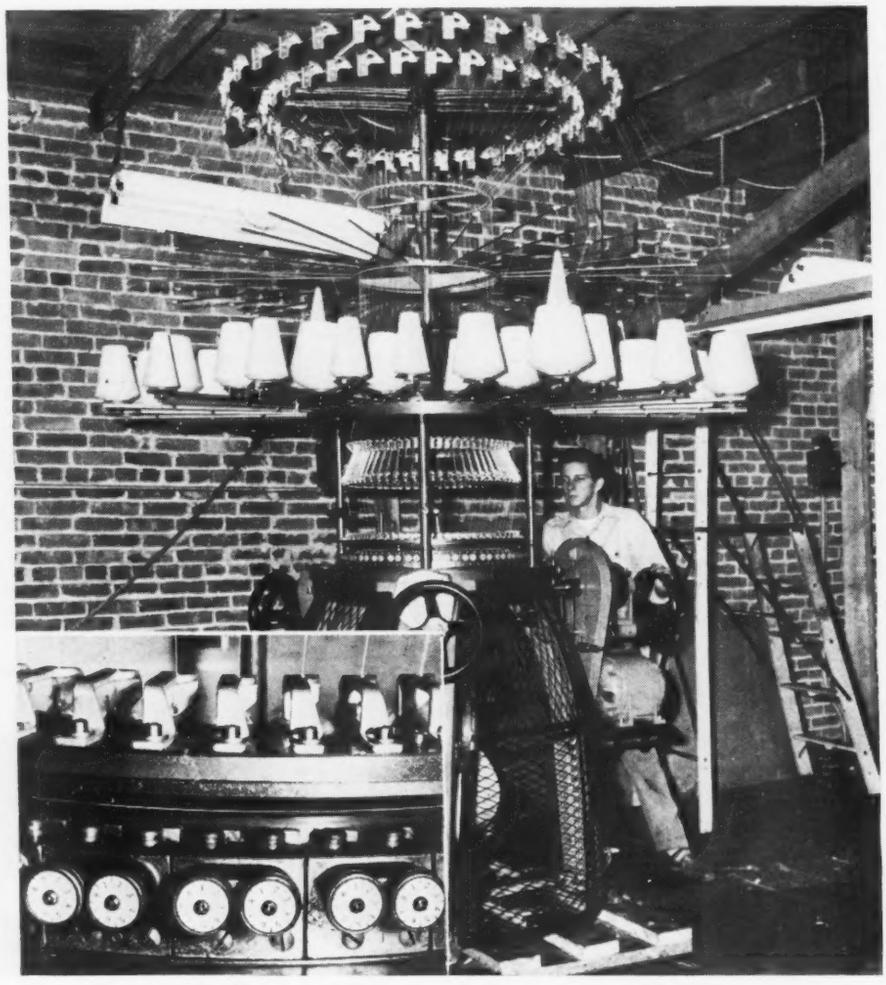


Fig. 1. Special features of the new MJ model, such as high speed and the micromatic stitch-control, prompted the management of Elbert Mills, Inc., to draw up a tentative maintenance schedule. Fig. 2. (Inset) Moved clockwise, the micromatic stitch-control dials loosen the stitch and reduce the stitches per inch. Moved counter-clockwise, they tighten the stitch.

COTTON-JERSEY PRODUCTION of 25 to 32 lb. per hr. is obtained from Supreme's new MJ model circular machine at Elbert Mills, Inc., Charlotte, N. C. Using 64 feeds, the mill knits underwear fabric from 18/1 and 20/1 combed peeler yarns at approximately 32 lb. per hr. Somewhat better fabrics from 60/2 combed-peeler yarns are knit at 25 lb. per hr. All fabrics are dyed or bleached in the piece, although dyed yarns for pattern effect may be run in the future; and blends of wool, rayons, and cotton may be knitted on the machines.

As with all new machines, proper schedules for maintenance, cleaning, and oiling were developed by the mill as operational experience required. While the machines at Elbert Mills are new and entirely satisfactory, they have been subjected to careful study and analysis from the standpoint of maintenance; this study, particularly since no previously published schedules have appeared, may be useful to other mills.

The results of the Elbert Mills study are shown in Figs. 3, 4, and 5. They are headed "Shift maintenance and cleaning of the MJ model"; "Weekly maintenance and cleaning of the MJ model"; and "Operational hints on the MJ model." These schedules are considered as tentative. They are based on limited experience with the new machines, but they have been outlined with the thought in mind of maximum maintenance for quality as well as high production, rather than the too-often-encountered objective of minimum maintenance for immediate high production only.

Since the MJ model is a new machine, some review of its construction may be interesting.

MACHINE DETAILS. The 64-feed latch-needle machine is driven by a 1½-hp. motor through a mechanism consisting of a clutch system somewhat similar to an automobile clutch. The cylinder diameter of the MJ model used at Elbert Mills is 20 in., and the gage is 20 needles per in. As shown in Fig. 2, the machine is equipped with micromatic stitch-control dials which can be set to the desired stitch. This represents a novelty in circular-machine design, as far as the writer's knowledge is concerned. By turning the stitch dials clockwise, the fixer can loosen the stitch in the fabric and thus reduce the stitches per inch. Turning them counter-clockwise, he tightens the stitch and thus increases the stitches per inch.

Special care must be given the recessed springs which are a part of the micromatic stitch control, and proper maintenance for these parts has been

listed under the various maintenance schedules illustrated. No tools are required to change the stitch, although the depth of cams may still be set by means of the standard wrench method familiar to circular-machine mechanics.

The revolving take-up is used for fabric packaging, and any size package may be doffed from the machine. At present, approximately 40-lb. packages are doffed, but some mills are doffing 60-lb. packages.

Wesco or Crawford stop motions are used for yarn and fabric defect control; and 64-feed set-up is considered standard practice.

MAINTENANCE. The maintenance charts shown in Figs. 3, 4, and 5, are based upon 2-shift operation. At present, the daily chart is followed by operators on both shifts. In event of 3-shift operation, the weekly chart may have to be followed twice per week.

Special emphasis has been given the cleaning and care of dial cams, rising cams, cylinder grooves, needles, sinkers, and needle butts. Particular attention should also be given the cleaning of yarn and fabric stop motions, and mills may find that the cleaning frequency will be governed by the grade and cleanliness of the yarns processed. With this in mind, it should be stated that combed yarns only are used at Elbert Mills at the present time.

Further details of maintenance methods are illustrated in Figs. 6 and 7. In Fig. 6, the important points to maintain on the cam block are listed. In Fig. 7, the methods of cleaning the cylinder grooves and rising cams are given. All the points mentioned in Figs. 6 and 7 are critical from the standpoint of stitch quality; and for this reason, they should receive careful and periodic attention, as will be noted from the weekly maintenance chart.

Maintenance and Cleaning of MJ Model per Shift

1. Wipe and blow off accumulation of lint and dust.
2. Oil oil-cups (6) and holes on outside of machine (7).
3. Disconnect power.
4. Turn take-up by hand to bring drive end of take-up to middle of gate.
5. Oil all oil-holes (8) and put a few drops of oil on gears and chain.
6. Oil idler pulleys.
7. Turn take-up motion to idler side, and oil all oil-holes (5) and chain.
8. Inspect take-up motion and under side of cylinder for loose screws and bolts.
9. Start machine.
10. Blow off dial cap thoroughly.
11. Oil latches.
12. Oil sinkers (2 places).
13. Oil needle butts.

Fig. 3. Shift maintenance and cleaning for the MJ model as practiced at Elbert Mills, Inc.

Maintenance and Cleaning of MJ Model Weekly

1. Blow off machine.
2. Power source off.
3. Wipe machine stands and guards.
4. Remove guards.
5. Blow off take-up gears, chain, and rolls.
6. Wipe under cylinder.
7. Remove all cam blocks.
8. Blow out cylinder grooves.
9. Brush cylinder grooves upward with dry brush.
10. Clean lint from rising cams with needle hook. Blow out under needle butts.
11. Brush vaseline into cylinder grooves.
12. Blow off and clean cam blocks thoroughly before replacing in machine. Recessed springs of the micromatic stitch control must be cleaned; remove all lint from cam surfaces.
13. Inspect cam blocks for rough surface and replace in machine. Rough places on cam blocks may be dressed down with very fine emery, and in all cases the cause of such damage should be immediately determined and removed.
14. Inspect and tighten machine nuts, bolts, etc.
15. Grease machine top and bottom gear racks, take-up Timken bearing, and fly wheel on drive. (Follow here with the shift oiling schedule).
16. Oil lightly fabric spreader, needles, and sinkers.
17. Start up machine.

Fig. 4. Weekly maintenance and cleaning for the MJ model at Elbert Mills, Inc.

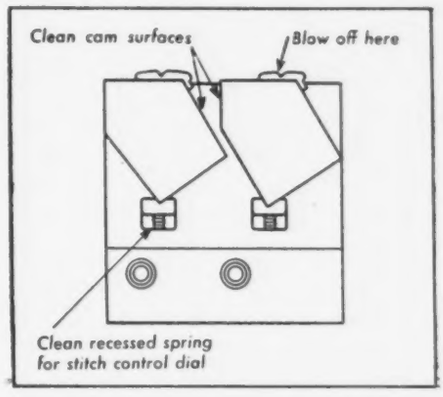


Fig. 6. Cam blocks are removed from the machine once weekly, and thorough cleaning is given the points illustrated above.

Operational Hints on the MJ Model

1. All parts of the machine should be kept free of loose dirt, lint, and excess oil.
2. Give strict attention to shift or daily maintenance procedures.
3. Oil needle latches and sinkers after every roll is removed.
4. Supervisor should check behind oilers; feeling of machine will show location of poorly lubricated part.
5. Wipe off take-up motion when doffing roll or fabric. This prevents soiling of new roll.
6. Unless blower or suction cleaning systems are used, the yarn cones should be blown off frequently, but operator should be careful not to disturb or distort the layers of yarn on the cone.
7. Top stop-motions should be blown out, but operator will encounter less trouble here if he works around the machine in clockwise fashion.
8. The same precaution applies when blowing off yarn guides.
9. To blow off cylinder:
   A. Blow off excess lint around yarn guides.
   B. Blow upward through sinker ring, which causes the lint to collect on dial cap. Blow it off.
   C. Hold the air nozzle near the edge of a yarn guide and blow straight down. (The guide selected should permit the air to flow between the cam blocks.) Wipe off collected lint with soft rag.
10. Whenever blowing off machine, blow air through the clutch plates. This will prevent lint accumlations here.
11. The lower gear housing should not be blown off. Wipe this area with a cloth or brush. The practice of blowing lint and dirt from this area may cause trouble in the gear ring or Timken bearing.

Fig. 5. "Hints for the operation of the MJ model," as written by the mill management.

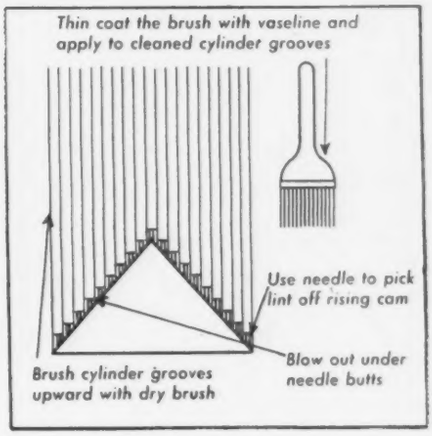

Thin coat the brush with vaseline and apply to cleaned cylinder grooves
Use needle to pick lint off rising cam
Blow out under needle butts
Brush cylinder grooves upward with dry brush

Fig. 7. Methods of cleaning the cylinder grooves and rising cams at Elbert Mills. Use 1-in. brush shown in insert for cleaning and lubricating cylinder grooves.

STATIC ELIMINATED by Grounding or Neutralizing

HIGHLIGHTS: *Static is generated by friction in all textile processes—Distortion of fibers ended by removal of electrical accumulations—Grounding of machines dissipates charges in many cases—Humidification alone may not eliminate static—Need for electrical neutralizers apparent in many operations.*

By H. S. KNOWLTON, *New England Editor, TEXTILE WORLD*

ELIMINATION OF STATIC electrical charges caused by friction between material in process and machinery parts is a constant problem in textile manufacturing. The fundamental phenomena of repulsion between like charges, and of attraction between unlike charges, must constantly be borne in mind in studying the behavior of fibers under friction. Distortion of fibers when electrified may cause great inconvenience, and the prevention of this misalignment has received much attention in late years. Remedies used range from gadgets to manufactured eliminator apparatus, used independently or in combination with humidification.

FORMATION OF STATIC. Static electricity—charges of relatively fixed nature, as contrasted with electrical energy in the form of current moving along conductors—is produced by contact and separation of dissimilar substances. A moving belt develops static as it comes in contact with and moves away from the pulley. For centuries it has been known that friction or pressure causes electric charges to appear in amber, glass, paper, wool, silk, etc., which impart to these materials the property of attracting dust, small bits of paper, and other light objects. This condition occurs in cotton and wool cards, calenders, paper machines, printing presses, etc. As stock passes through the machines, friction or pressure disturbs the neutral condition of the material and causes it to become electrified or charged.

Static charges are of two kinds: "positive" and "negative." Benjamin Franklin introduced the terms about 1747. He arbitrarily called a body positively electrified if it were repelled by a glass rod rubbed with silk and a body negatively electrified if it were repelled by sealing wax rubbed with cat's fur. These remain the definitions of positive and negative electrical charges in twentieth-

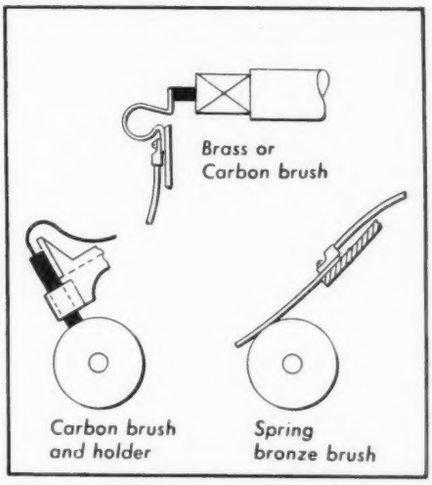


Fig. 1. Methods of grounding shafting or metal rollers.

Figs. 1 to 5 courtesy of Associated Factory Mutual Fire Insurance Cos.

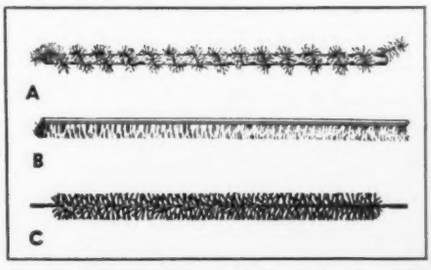


Fig. 2. Various types of static collectors: (A) tinsel wound spirally on wooden bar; (B) bronze wire-bristle brush set in metal back; (C) Copper- or bronze-bristle brush set in twisted wire.

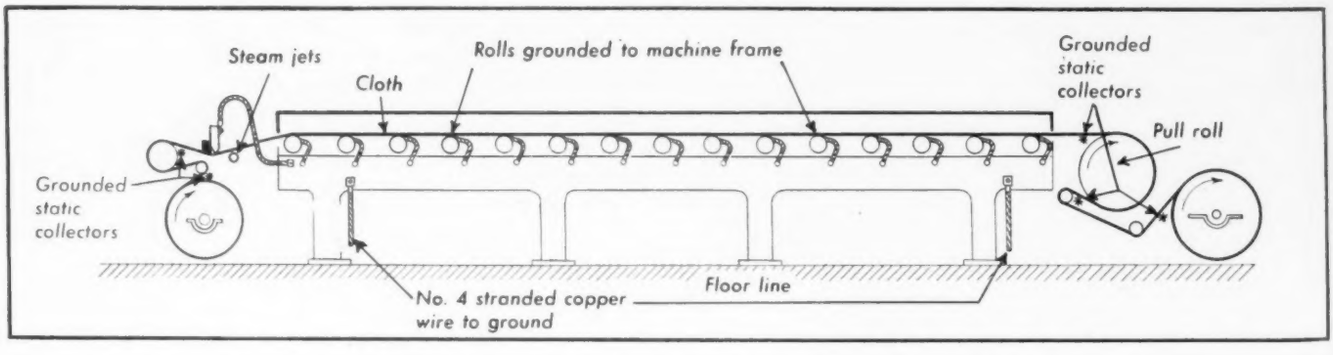


Fig. 3. Grounding of spreader machine, showing locations of static collectors and steam jets.

century terminology. It was also surmised by Franklin that positive and negative charges always appear in equal amounts. When a body has equal positive and negative charges, it is said to be in a state of static equilibrium, neutral, free from resultant charge, or at earth potential.

When a neutral body is "frictioned" so as to upset its static equilibrium it is said to be charged—which means that it possesses an excess of either positive or negative charges and a deficiency of the opposite kind of charge. Dissipation of such static charges as fast as they are formed on textiles in process becomes highly important in these days of high labor cost and volume production.

Prevention of fires and explosion hazards due to static is another problem which it is essential to solve in industrial operations involving inflammable or explosive material and atmospheres. Fortunately there are few "static" fires in textile operations because high humidity is so generally maintained. The Associated Factory Mutual Fire Insurance Cos. state in Bulletin No. 12.21, that with a humidity of 50% or above there is little likelihood of unsafe static accumulations because a thin conducting film of moisture deposited on most objects conducts the charges to ground as fast as they are generated. The absence of "moisture film" explains why most static fires occur in winter when the indoor relative humidity is low.

Static is said to be temperamental because its appearance is at times apparently unpredictable and outwardly inconsistent. This is, of course, due to varying and often unapprehended con-

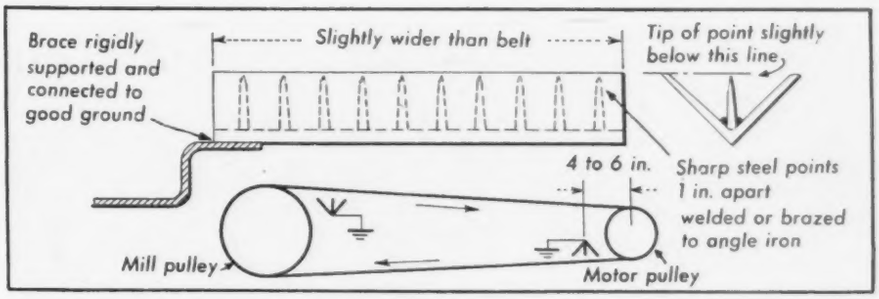

Brace rigidly supported and connected to good ground
Slightly wider than belt
Tip of point slightly below this line
4 to 6 in.
Sharp steel points 1 in. apart welded or brazed to angle iron
Mill pulley
Motor pulley

Fig. 4. Details and locations of static comb for belt drives.

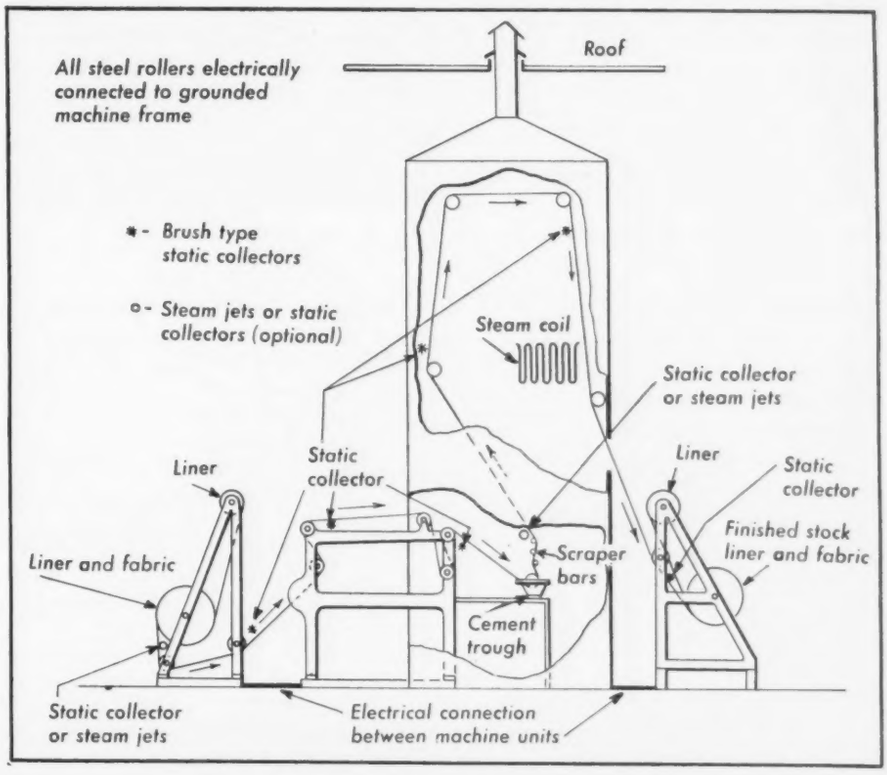


Fig. 5. Grounding of vertical cement-coating machine.

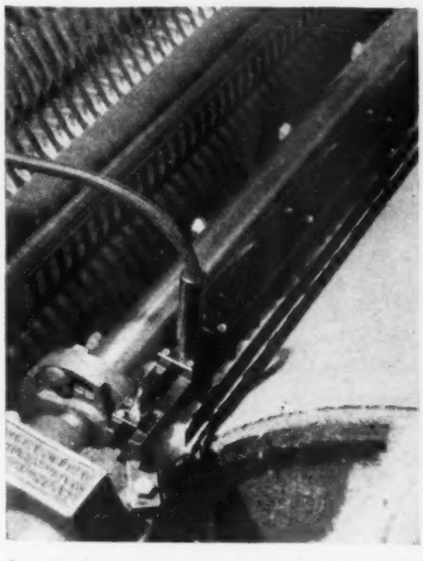


Fig. 6. Application of inductor bar to finisher doffer comb of wool card.

Figs. 6 to 8 courtesy Chapman Electric Neutralizer Co.

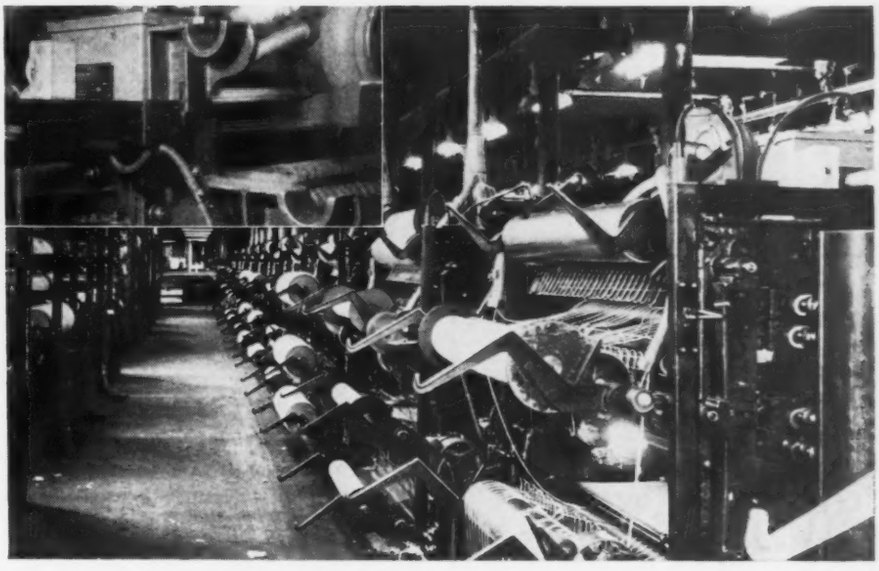


Fig. 7. Line of wool cards, each equipped with neutralizers. Inset shows individual transformer as mounted on top of condenser.

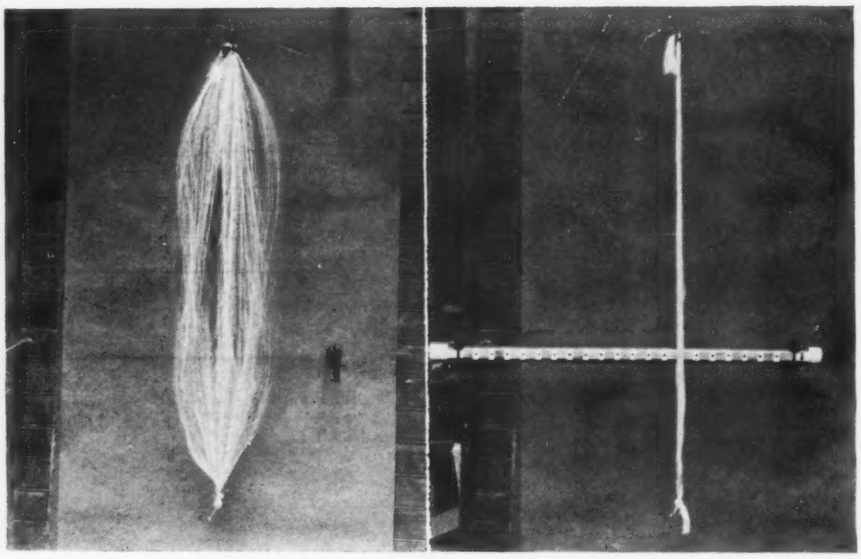


Fig. 8. Skein of silk (a) puffed open by static, and (b) with static removed by inductor bar.

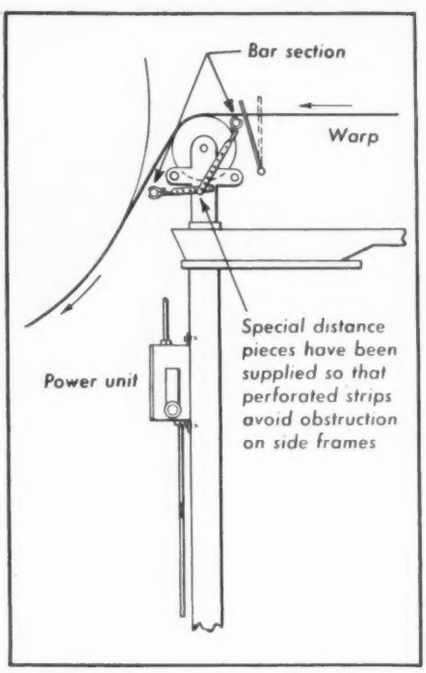

Bar section
Warp
Special distance pieces have been supplied so that perforated strips avoid obstruction on side frames
Power unit

Fig. 9. Tandem-type static bars on high-speed horizontal warper.

Figs. 9 to 14 courtesy The Simco Co.

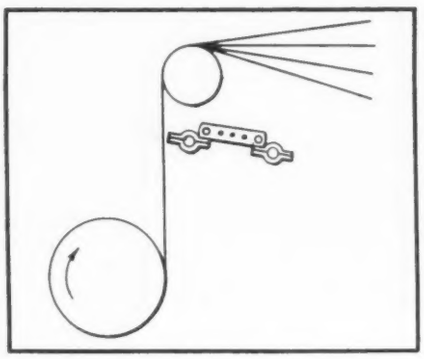


Fig. 10. Static bar location on beam warper.

ditions. It sometimes happens that three or four processing machines of identical design, handling what is classified as the same material under apparently the same conditions, vary as to static trouble. One machine may have considerable static and the rest little if any. Dry air lends itself to static formation much more readily than moist air. Often the subjection of materials to sudden temperature changes will cause them to become charged without being subjected to frictioning.

METHODS OF COMBATING STATIC. Grounding to a low-resistance ground will generally prevent static accumulation on metal parts of a machine. A single ground wire connected to an all-metal machine at one point, however, may not suffice because paint, rust, corrosion, or lubricating oil may insulate one part from another. Factory Mutual recommends that all metal parts be bonded together or separately grounded, and that revolving metal parts be kept clean. Graphite mixed with the lubricating oil sometimes serves as satisfactory grounding for revolving parts, but it is more reliable to provide grounding brushes or wipers which contact the parts. For mechanical reasons, copper wire no smaller than No. 6 B. & S. gage is advised for electrical grounding connections; insulated wire preferred. Good maintenance of grounds is important, and all grounding connections should meet National Electrical Code requirements. Such connections may be made to wet sprinklers or water pipes, but not to dry-pipe sprinklers or other pipes likely to be disconnected. Metal plates buried in, or pipes driven into moist earth may be used if water pipes are unavailable.

Insurance engineers speak favorably of eliminating static by grounded brass, bronze, or copper wires arranged in numerous sharp points. Tinsel bars or wire bristles set in metal serve well. Because collectors are subject to injury, or may pick up insulating material when in contact with stock in process, it is advisable that they be separated ¼ to ½ in. from the moving material. They should be located not over 4 to 6 in. from the point where the stock separates from rollers, guide bars, or material.

Drag chains are poor conductors of static. The use of conducting belt dressings and of static collectors in connection with belt drives is advised in cases where static is developed. This is discussed in some detail in the Factory Mutual bulletin previously mentioned. Tests for static are probably made most easily by the use of small portable neon tube test units; a glow or flash in the tube indicates the presence of static when test contact is made.

STATIC ELIMINATORS. One of the most logical methods of static elimination is to supply the material in process, by some electrical means, with an opposite kind of charge. Commercial neutralizers are making a fine record in applications using this principle. These devices utilize a high-voltage alternating charge to wipe out the static charge and leave the material electrically neutral. The equipment receives its supply from an ordinary 110-, 220-volt a.c. outlet. A transformer steps up the potential usually to 12,000 to 15,000 volts, which is carried by highly insulated wires to distributing points in the manufacturing process. Here so-called inductor bars, mounted in or on the processing machinery and supplied from the high-voltage circuit, receive the alternating charges, set up corresponding electrical fields in close proximity to the material, and neutralize the static formations. Very small currents are involved, often of the order of 0.01 ampere. The inductor bars function as electrical condensers in order to separate the high-voltage supply from the inductor bar discharge assemblies. These carry small metal points or wires at the outer portions of which an electrical "brush" discharge occurs, producing a localized area of ionized air near the surface of the material.

In representative equipment, the points of the inductor bar are located ½ in. or more from the material and directed radially toward it. They produce a high-intensity constantly-reversing field (usually 60 cycles per second in harmony with the current source) in the path of the material. Whether the static charge be positive or negative,

this reversing field always supplies the right kind of charge to neutralize it. The bars are inconspicuous and are designed to permit adaptation to a wide variety of machinery, space limitations, accessibility. The trifling amount of energy consumed makes their operation inexpensive.

The greatest trouble from static electricity in the textile industry is the repulsive action it creates between fibers. On cards, the fibers are pushed away from each other the instant they leave the doffer rolls, and their extremities take up radial positions very unfavorable to subsequent processes. A properly placed inductor eliminates this as well as the sticking of sliver to the rolls, thus insuring more uniform sliver and avoiding much waste. Steam jets may then become unnecessary; but this does not mean that controlled humidity is undesirable in many operations.

On a woolen finisher card, static is generated mainly in the rub rolls. This can be removed by locating an inductor directly above the point where rovings emerge from the rub rolls, and at a distance of perhaps 2 in. Cards with tape condensers are sometimes equipped with an additional inductor placed at the doffer comb back of the condenser. A notable advantage of using eliminators in wool carding is the ability of the mill to start the cards promptly every morning in the year in any climate, and to continue to run all day with uniform quality and quantity of output.

In cotton carding, the first sign of static appears in doffing. When the fibers are charged, the normally smooth operation of the card is interrupted by the tendency of the web to roll up under the comb (or to hop back over it upon the doffer), and for edges of the web to swing out and cling to the comb shaft journal boxes. In typical neutralizer installations, an inductor is mounted above the comb just high enough to clear it at the top of the stroke. The inductor is as long as the doffer is wide, and its active points are long enough to reach down between the comb struts to within effective working distance of the cotton. In a typical construction the points are inside hard rubber teeth, and treatment is applied at the exact source of trouble.

(Continued on page 115)

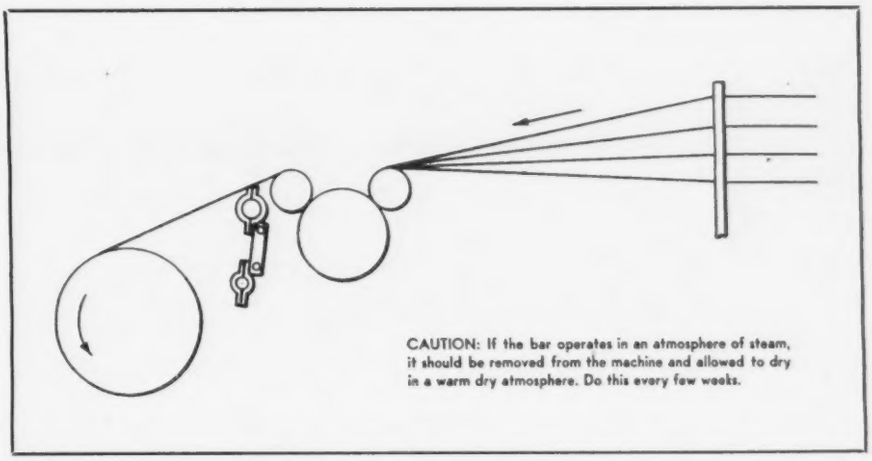

CAUTION: If the bar operates in an atmosphere of steam, it should be removed from the machine and allowed to dry in a warm dry atmosphere. Do this every few weeks.

Fig. 11. Installation of static bar on slasher.

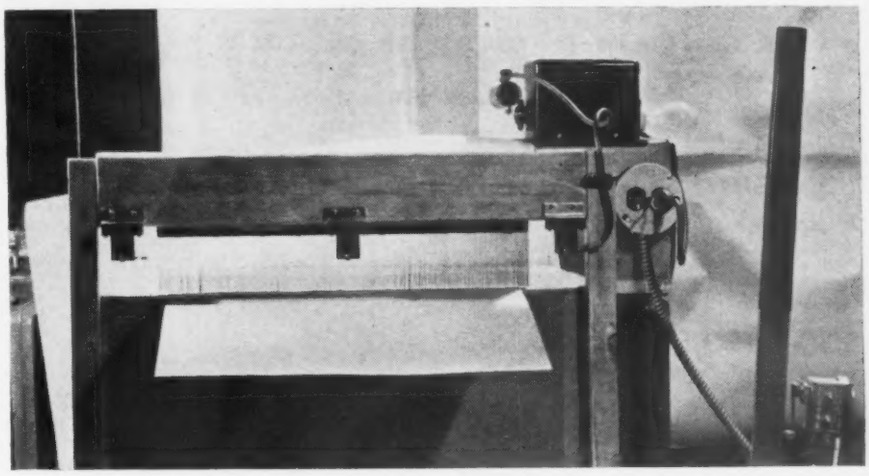


Fig. 12. Open-type static applicator as applied to loom. Power unit mounted on loom frame takes power from receptacle, feeds high-voltage to applicator wire mounted in front of reed. Shipper handle operates limit switch to de-energize applicator when in "off" position.

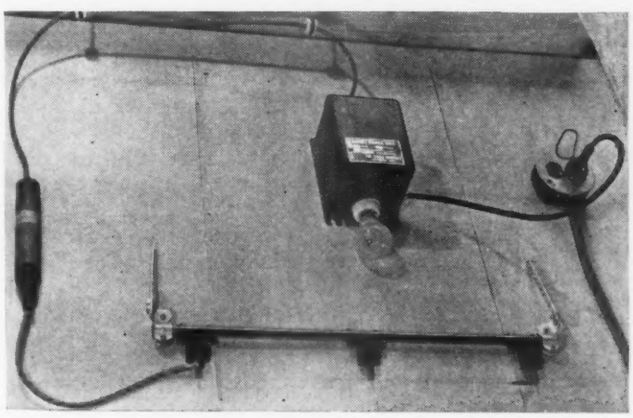


Fig. 13. Complete static eliminator system, showing necessary elements, with open-type applicator.

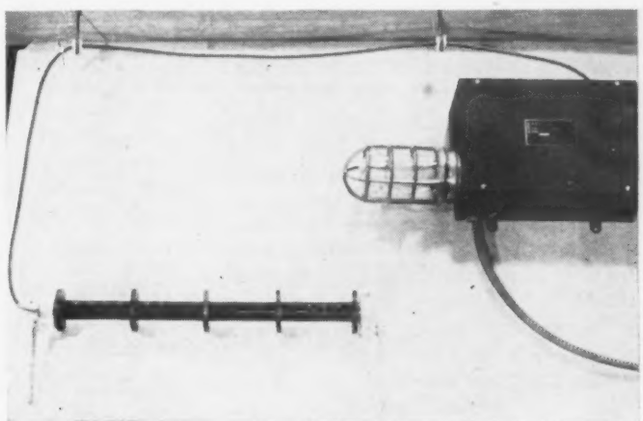
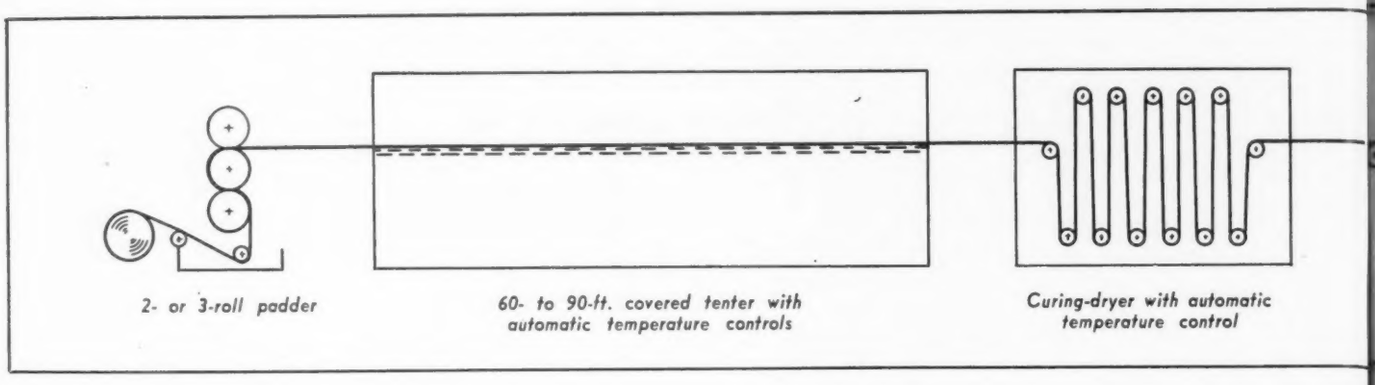


Fig. 14. Complete static eliminating unit with shielded applicator for use in inflammable and explosive vapors.


2- or 3-roll padder
60- to 90-ft. covered tenter with automatic temperature controls
Curing-dryer with automatic temperature control

Newly Developed Process STABILIZES VISCOSE Fabrics

HIGHLIGHTS: *Permanent chemical treatment does not hydrolyze or have chlorine retentive properties—Residual shrinkage in fabrics reduced to less than 2%—Hand of fabrics unaffected—May be applied with other finishes.*

By DR. JACK EPELBERG
Research and Development Division
Cluett, Peabody & Co., Inc.

PERMANENT STABILIZATION of viscose-rayon fabrics by chemical means, eliminating the normal tendency of such fabrics to shrink or stretch when laundered, has been achieved by Cluett, Peabody & Co., Inc. The process, which can be performed on regular finishing-plant machines, was developed to overcome the disadvantages of impermanence, poor hand, and/or chlorine retention characteristic of other stabilizing finishes. Continuous research since before the war, both in the laboratory and in finishing plants, was required to develop the process.

In investigating aldehydes as suitable reagents for stabilizing rayon fabrics, glyoxal was the only one that gave promise. Continued work in the laboratory resulted in a successful treatment using a water solution containing glyoxal and acid catalyst.

By means of the reaction developed, swelling of the fibers in water or soap solutions is reduced from 45% to 10% due to substitution of oxyacetylene bridges for hydrophilic hydroxyl groups in the molecular structure. Reduction of excessive swelling eliminates most of the potential fabric shrinkage, and the small remaining potential shrinkage is eliminated by mechanically relaxing the fabric.

BAKING MOST CRITICAL. The chemical reaction is accomplished in plant operation by the following procedures. First, the fabric is wetted with the chemical solution by means of a padder tank or auxiliary immersion tank. Secondly, excess chemical solution is removed from the fabric by squeezing between the padder rolls. Third, moisture is eliminated from the fabric by drying on a tenter frame. Fourth, heating or baking the dry fabric to react the glyoxal with the cellulose is accomplished in a suitable oven at a definite temperature and for a definite time. Fifth, unreacted chemical and catalyst are removed from the fabric by washing in soap and soda-ash in a dyebeck, or continuous washer.

The essential chemical reaction occurs during the heating or baking which is, therefore, the most critical operation.

After washing, the fabrics are slack-dried in order to take up the small amount of potential shrinkage remaining, and then are steamed on a tenter frame to the proper width.

From the plant production viewpoint, the important factors are: preparation of fabric, which must be neutral, absorbent, and free from sizing or dyeing assistants; impregnation with chemical treating solution; proper curing conditions; and handling the fabric under minimum tension after it has been cured and washed as described here.

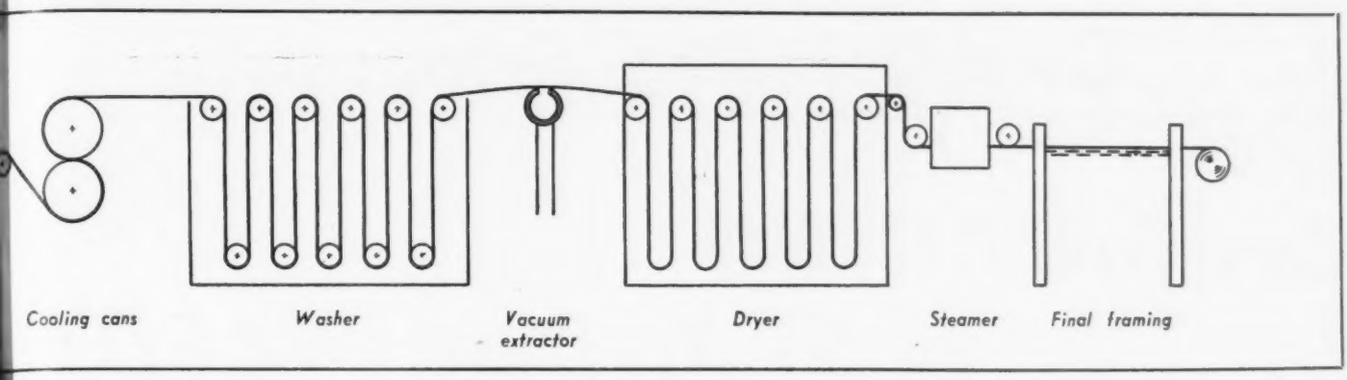
The glyoxal process is primarily applicable to viscose or cuprammonium rayons. It is not as satisfactory on acetate, although blends of viscose and acetate can be treated satisfactorily when viscose constitutes the major portion of the blend. It is unsatisfactory for fabrics containing cotton.

Absence of chlorine retention makes it especially applicable to fabrics to be finished in white. The slight yellowing produced on such fabrics can easily be removed by a light bleach after the treatment. This operation is combined with the slack washing which always follows the treatment.

EFFECTS ON FABRIC. The treated fabrics have certain important characteristics which should be mentioned at this point: glyoxal stabilization has no stiffening or harshening effect on hand or texture because there is no formation of material on the surface of the fibers (a firm or a crisp hand can be produced by adding the appropriate stiffening agent to the solution); stabilization produced by the process is permanent to washing at any temperature; no offensive odors can develop because no hydrolysis occurs under storage conditions; reacted glyoxal becomes a permanent part of the fiber substance and unreacted glyoxal is removed during washing; stabilized fabrics have no chlorine-retention properties, and thus white and pastel-shade fabrics can be safely stabilized.

In addition, glyoxal stabilization can be combined, under the proper conditions, with other finishes which require much the same mechanical han-

Abstract of paper before American Association of Textile Technologists, New York, June 5.



dling, including a curing operation. An example is the combination with certain durable water-repellent treatments.

A technical characteristic of interest is the fact that the treated fabric is not soluble in cuprammonium solution, and will not form cellulose xanthate. This, together with the greatly decreased swellability of the fibers, seems to indicate that actually a new type of fiber is produced.

The chemical reaction and the heat treatments result in decrease in dry tensile strength not exceeding 20%, and averaging lower than this amount. Wet tensile strength usually shows less reduction. Treated fabrics show lowered abrasion resistance, but collars made of treated fabric subjected to multiple laundering showed much less wear than untreated ones, and after 40 launderings were still in good condition, whereas the untreated collars showed bad disintegration.

PLANT EQUIPMENT. Usual plant equipment is used in work on glyoxal stabilization [illustrated in the line drawing].

To neutralize the fabrics and remove excess unreacted chemicals after curing, the fabrics should be washed in synthetic detergent and soda ash on a battery of slack-loop continuous dyebecks or on a continuous open-width washer. Unless the fabric is to be bleached, only a relatively short wash is necessary.

Decatizing or calendering may follow but excess tensions should be avoided.

Static Elimination (*Continued from page 113*)

HUMIDIFICATION. There is some difference of opinion as to the sphere of moistening systems in eliminating static. It is contended that in some cases high relative humidity tends to cause rusting of cards and card clothing, besides having some effect on the comfort of operatives. It would, however, be wide of the mark to conclude that static elimination by electrical means does away with the necessity for humidification, since the need of the latter for many processes is vital.

More data on the performance of various methods of static elimination in different branches of the textile industry, individually and jointly, are desirable. In this connection the results of research in the field of compressed air in textile processing, including experiments with electrified air which have not yet been made public, will be awaited with interest.

In cotton drawing-frame operations, a representative maker of neutralizer equipment treats each delivery in two places: once just as the sliver comes out between the front rolls, and again as it enters the coiler. The first treatment aims to stop the tendency of the sliver to puff open while between the front rolls and the trumpet (due to repellent action when ionized), and to prevent licking of the fibers around the top front roll due to attraction between this roll and the fibers when the latter are electrified. Licking may also be caused by excessive moisture in the stock with no electricity in the sliver, but the maker of this neutralizer contends that with his equipment no artificial humidity is needed to make the work run smoothly, and that cause of licking is removed except perhaps during long periods of wet weather. The object in treating the sliver again before it enters the coiler is to neutralize any charge regenerated in it as it passes through the trumpet and the calender rolls. Even a slight charge in the sliver at this point will make it stick to the walls of the inclined passage of the coiler, so it is essential that the sliver be electrically neutral.

When a cotton mill turns to utilization of wool, or blends containing wool, Aralac, or acetate staple, the degree of humidification satisfactory for cotton, and possibly for viscose rayon, does not always keep down static, especially on the drawing process. For handling cotton fibers alone, humidities of 50 to 60% are widely accepted as satisfactory. With light-colored and white wools, static troubles seem greater than when working with heavy colors like indigo blue.

In the high-speed rayon field, slashers and warpers have been advantageously equipped with devices which remove static on the front end just before beaming. On silk warpers and cards, neutralizers have also been found extremely useful. It is well known that no textile material exceeds silk in susceptibility to charges of static electricity or in duration of their retention.

On nappers, use of static eliminators frees the surface of the material from attracting dust and debris; on shears it keeps the sheared pile free from static influence and thus facilitates its removal; on garnetts, waste cards, etc., it increases production and reduces waste. Folders and dryers are also fields for neutralization.

In conclusion, it appears that, while there are numerous methods available for dealing with static problems, the record of electrical neutralization is highly challenging as compared to the "gadget" type of remedy. In order more accurately to determine procedure in the face of the numerous variables encountered in textile production, it would be helpful to accumulate and interpret data on static on a more scientific basis. The wide range in materials now encountered, the limitations of atmospheric conditions, the influence of trends in textile machinery design, movement of research, and need for closer comparisons in practice all point to the importance of a more scientific approach to this subject in relation to forecasting and interpreting field results.

Acknowledgments are due to Prof. Russell L. Brown of the Lowell Textile Institute; Prof. Edward R. Schwarz of the Massachusetts Institute of Technology; H. B. Riehl, chief engineer textile division, Proctor & Schwartz, Inc., Philadelphia; Julius Simons of the Simco Co., Philadelphia; Harry Bradford of the American Moistening Co., Providence, R. I.; to the Parks-Cramer Co., Fitchburg, Mass.; Geo. H. Chapman and M. S. Pennell of the Chapman Electric Neutralizer Co., Portland, Me.; and the Associated Factory Mutual Fire Insurance Co., Boston, Mass., for cooperation in relation to this subject.

A Card-Grinding Symposium

Can GRINDING Be STANDARDIZED?

HIGHLIGHTS: *Doffer-grinding speeds in one mill vary from 523 to 950 r.p.m.—Grinding data from nine mills indicate a need for standardization—Most mill men favor standardization only within a mill.*

Turning the spotlight *on present practices in card grinding reveals that this job is one of the few jobs in cotton mills which has not been subjected to modern methods of checking, testing, and controlling. In this symposium prepared by practical mill men, Mr. Fogel points out some of the apparent discrepancies in card-grinding practices and urges standardization; Mr. Carter defends present grinding methods; and a member of* TEXTILE WORLD*'s editorial staff reports the joint opinions of a large number of mill operating executives. The records indicate considerable variation in practice and suggest closer supervision and control of card grinding.*

Grinding Schedules Show UNREASONABLE VARIATIONS

By LAMAR FOGEL

FOR A NUMBER OF YEARS the writer has gathered and studied test data on card grinding from a large number of mills. Tests from nine different mills show that variations in grinding speeds may vary in one mill as much as 81.64% on doffers, 33.16% on cylinders, and 52% on flats. These tests are shown in condensed form in Fig. 1.

Mill-to-mill variations may be expected; yet, Mill D shows a high of 860 r.p.m. traverse-roll speed for the cylinder, and Mill E shows a low of 558 r.p.m. In this particular instance, Mill E is the heaviest producer per card in the whole group. The speed of doffer traverse-roll grinders varies in the mill from 950 r.p.m. to 523 r.p.m., which accounts for the 81.64% high mentioned. The speed of drum grinders on flats over the 9-mill group varies from 960 r.p.m. to 500 r.p.m.—a variation of 92%.

There are many factors which would justify some variation in grinding speeds and cycles from mill to mill, and indeed in the same mill. Such factors as stock, machine settings, machine speeds, and the quality of clothing purchased will affect the need for grinding and the resultant speeds and frequencies. After close experience with these variables in the mills represented by the test data in Fig. 1, the writer cannot believe that such variables will influence speeds and frequencies to the extent shown in the tests.

Fast speeds of grinding rolls, moderate bite of the abrasive, and short durations of grinding will keep clothing wire sharp and not result in needless waste of wire. On the cylinder, which has the heaviest load in the process of carding, the writer suggests and practices a speed of from 800 to 840 r.p.m. on traverse-roll grinders. A tolerance of 2.5% should be adequate for variation from these speeds, and the grinding rolls can be operated within this tolerance with rope drives, provided the supervisor will occasionally check the practice of individual grinders.

DOFFERS. Doffers should be ground at a speed of 615 r.p.m., with a 2.5% tolerance; and they should be ground at the time the cylinders are ground. Drum grinders on flats should be operated at 700 r.p.m., but the duration of the grinding period should not be so long as those on doffers and cylinders. The practice now in some mills is to grind 3 to 4 hr., in others 7 to 8 hr., and in one particularly large mill, the grinding period is 20 hr.

Using good grinding fillet and changing it when six cards have been ground, a grinder can maintain his cards in good condition with a 4-hr. grinding period at each frequency. This standard is based upon a card-production rate of 3000 to 3300 lb. between grindings, reasonable care of butts at the time laps are laid, and competent grinders and setters. The standard will not take care of the occasional facings and jams which occur, but these require special treatment anyway. Four-hour grinding will not suffice where continuous strippers are used, and the standard should not be applied to these cases.

Regardless of the exact grinding period desired, there is not much doubt

	Traverse-Roll Speed (r.p.m.)		Drum-Grinder Speed (r.p.m.)
	Cylinders	Doffers	Flats
Mill A	685 to 750 Variation 9.49%	645 to 720 11.60%	670 to 750 11.93%
Mill B	720 to 770 Variation 6.94%	750 to 775 3.34%	740 to 770 4.05%
Mill C	570 to 745 Variation 30.7%	560 to 735 31.25%	645 to 750 16.28%
Mill D	840 to 860 Variation 2.38%	630 to 670 6.35%	700 to 745 6.43%
Mill E	558 to 743 Variation 33.16%	523 to 950 81.64%	681 to 960 40.97%
Mill F	685 to 750 Variation 9.49%	685 to 710 3.65%	655 to 755 15.27%
Mill	690 to 815 Variation 18.12%	750 to 770 2.67%	500 to 760 52.0%
Mill H	680 to 785 Variation 15.44%	670 to 730 8.96%	670 to 740 10.45%
Mill J	735 to 790 Variation 7.48%	730 to 785 7.53%	740 to 775 4.73%

Fig. 1. Mr. Fogel's tests from nine different mills condensed to show the variations in grinding speeds.

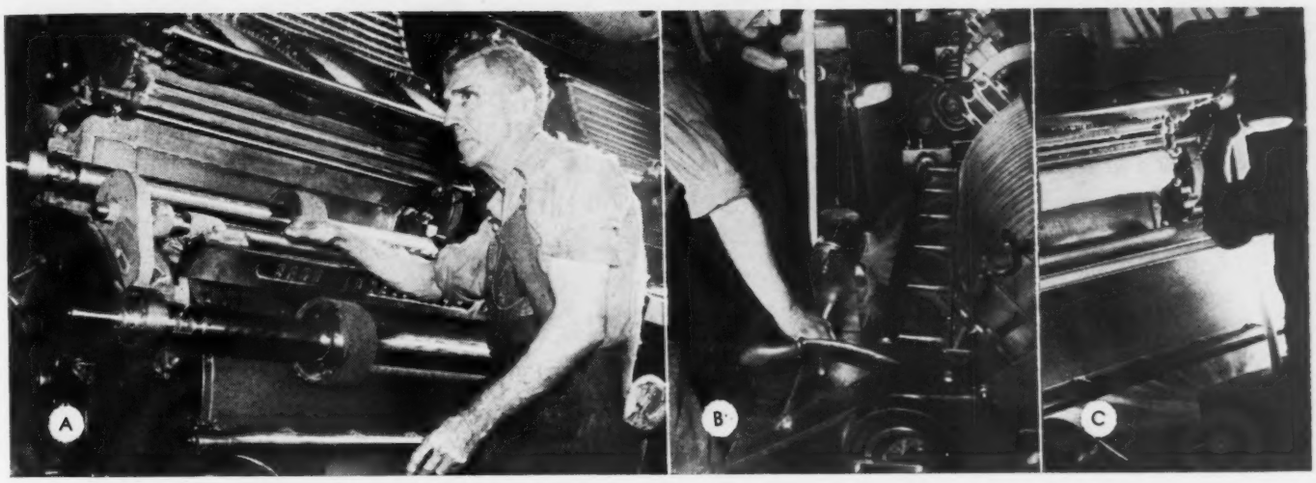


Fig. 2. Card grinding, one of the most important jobs in a cotton mill, not only requires that the grinder accurately use gages graduated in thousandths of an inch, but also that he accurately gage and inspect with his ears and eyes. At A the grinder is setting the tranverse-grinding rolls, gaging the depth of abrading by sound. After the card has been ground, set, and started up, the grinder at B is inspecting the quality of the card web. At C, the grinder is inspecting the card sliver for cleanliness.

that needless grinding of flats has accompanied and continues to accompany any schedule which requires identical grinding times, and frequencies for flats, doffer, and cylinder. As a result, some mills require that the flats be ground only once to each two or three grindings of the cylinder and doffer and that the flats be burnished just prior to grinding.

GRINDER CRADLE. Mills have found, too, that the same cradle should be used for the card at each grinding in order to get the same line of grinding during the life of the flats and to help avoid high and low flats. Setting of the flat grinding drum is a job for an expert, and sounding should be done on each end with the same ear to avoid wedge-ground flats.

One other factor which should be considered in this study is the traversing motion of the grinders on the cylinder and doffer. The roll makes a complete trip across the surface of the cylinder in approximately 12 sec., or five times per minute. The back-and-forth motion of the traverse grinder is the means for the side grinding of the pointed wire. This side grinding can be done well with grooved emery fillet, but none is effected with some types of flat, grit-surfaced fillet. In fact, the latter may be a detriment to the clothing.

Present Grinding Methods Do Not Shorten CLOTHING LIFE

By SETH CARTER

THE MATERIAL by Mr. Fogel certainly brings vividly to the attention of carders a condition well known to exist in many mills. It is difficult to explain or justify the mill-to-mill variations in grinding-roll speeds. The manufacturers of rolls recommend certain speeds for the various types of rolls; and these speeds, which have been determined by actual trials under mill conditions, should be followed closely for best results. However, these speeds are not too critical, and a reasonable leeway is permissible. The extreme variation of 81.64% cited by Mr. Fogel is surely outside of all reasonable limits.

The frequency of grinding is generally arranged to fit the size of the card-grinder's section. If he has 40 cards and grinds two cards a shift, he grinds each card every 20 shifts. If he has 50 cards to a section and grinds two cards a shift, he then grinds each card every 25 shifts. Here, then, is a variation of 25% that is very conveniently ignored; and examination of the clothing and product fails to show any injury, shortened life, or quality loss because of the 25% difference in grinding frequency.

FOUR-HOUR PERIODS. The grinding period in the better-managed mills has been shortened to four hours with a frequency of 20 to 25 shifts. This standard may appear to be inconsistent, with card production varying from 5 to 12 lb. per hr. and the required quality of sliver varying in inverse ratio to the production; yet, the advantages of regular grinding schedules are such that this apparent inconsistency has ordinarily been ignored.

Flats are usually ground with a long roll every third grinding cycle; and in passing, it may be noted that the advantages of the traverse grinder on flats are well worth serious investigation by progressive carders.

Mr. Fogel's evidence of excessive or irregular grinding would cause much worry and apprehension among carders if they did not have their records of card-clothing replacements during the last quarter century—a period which covers two major wars and many labor battles in which the best card-room help was not always available.

With cylinder, doffer, and flat clothing giving 12 to 15 yr. of service on two- and three-shift operation, there is positive proof that our somewhat haphazard methods have done little to shorten the useful life of clothing. It must be admitted, though, that our grinding habits have not added anything to the life of clothing and that efficient planning of grinding routine might further extend the clothing life. The satisfactory life of clothing can be mainly attributed to the excellence of the clothing itself; and to clothing manufacturers should go the credit for the uniform quality of foundation, wire, and workmanship.

Another factor in long clothing life is the care and supervision of well-trained grinders. Despite grinding routines and methods based partially on tradition handed down from the days of the wooden-flat cards, well-trained grinders do an excellent job in maintaining wire points in first-class condition. That there are few cases of injurious excessive

(Continued on page 206)

SOLVENT VAPORS
Dangerous When Uncontrolled

HIGHLIGHTS: *Hazard is most often ignored when solvents are used only intermittently — Maximum concentration allowable for common solvents varies from 20 to 1000 ppm. — Most vapors are heavy and should be exhausted from below.*

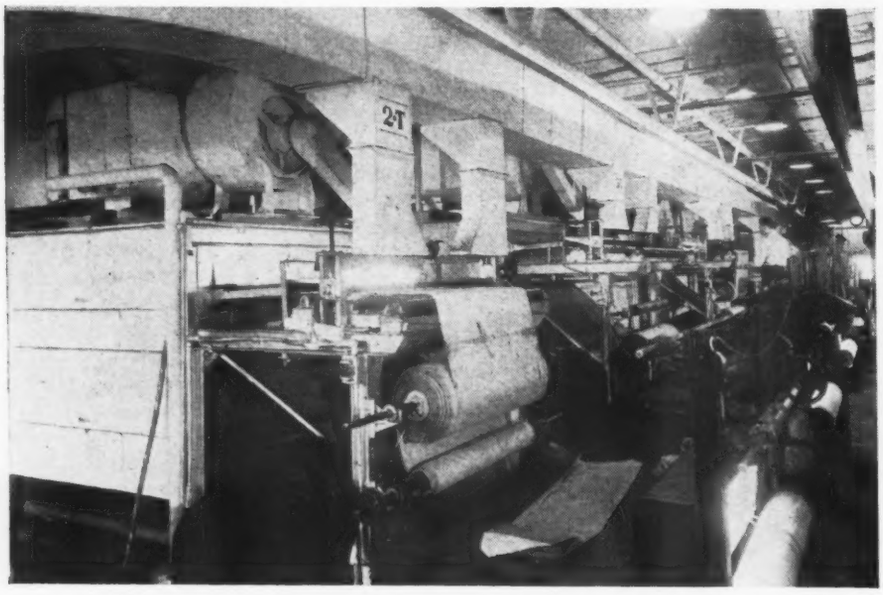
By MABLE FOY, Ph.D., *Safety Research Institute*

THE READILY VOLATILE LIQUIDS known as organic solvents find many uses in the textile industry because of their ability to dissolve grease and oil readily and to act as solvents for coating compounds and finishing materials. Most of them are highly flammable and can be dangerous to health unless handled carefully.

The high flammability of most solvents is generally recognized, particularly by larger consumers. In plants where benzine is used to scour raw wool, for example, the process has been made relatively safe by the use of equipment and by work procedures specifically designed to circumvent the danger of fire.

The possibility of injury to health is also familiar to most of the larger users of solvents. Cases of insanity and nervous diseases due to the inhalation of carbon disulfide vapors were frequently reported among workers in viscose rayon plants some years ago, but now solvent accidents in these plants are rare.

In many textile units, however, organic solvents are used only irregularly, intermittently, or in small amounts; and under these circumstances less attention is usually given to the danger to health. In one Southern textile factory, for example, 135 people became ill from inhaling the vapors of a solvent which was used to remove grease spots from nylon cloth. Upon investigation, it was found that about 4 gal. of cleaning fluid were used each day and that it was handled freely and kept in open containers. When cold weather set in, most of the windows were closed, diminishing the natural ventilation. The solvent vapor quickly accumulated in the workroom until it reached a harmful concentration; and headaches, gastric disorders, and cases of acute illness resulted.

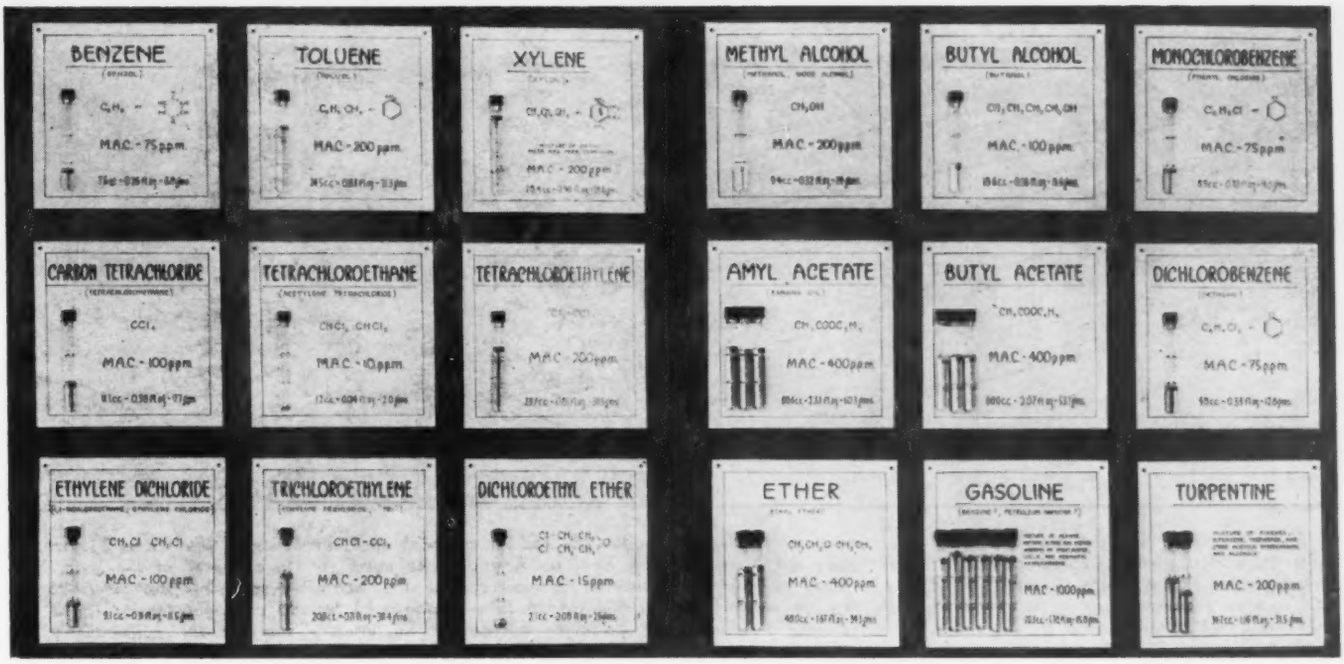


Coating cloth frequently requires elaborate system to remove solvent vapors such as shown here in a plant of The Firestone Tire & Rubber Co.

VAPORS CAN KILL. When organic solvents are used in a new procedure, unfamiliarity with these materials and their health hazards may lead to accidents or injuries. One such instance occurred in a factory making lining material for fused collars by impregnating cotton cloth with a plastic. The cloth was run through a solution of the plastic in a mixture of organic solvents and was then passed through a warmed drying tunnel. The solvent vapors which were driven off escaped into the workroom, one young workman died as a result of breathing this contaminated atmosphere, and three others showed definite symptoms of poisoning.

The special properties that make the organic solvents so useful industrially are precisely those that make them hazardous. They are excellent dissolving agents for fats, oils, waxes, and similar materials, and are able to exert their solvent action on the skin as well as upon inert substances. Prolonged or repeated contact of the skin with an organic solvent may lead to the development of dermatitis. The skin should be protected by the establishment of work procedures which eliminate direct contact with the liquid or reduce contact to a minimum. The hands can be further protected by gloves made of a material impervious to solvents. Where the use of gloves is undesirable, glycerin or an appropriate water-soluble protective cream may be rubbed into the skin. The hands and face should be washed often with mild soap and warm water as a major aid in preventing skin disorders caused by solvents.

HEAT INCREASES DANGER. A valuable characteristic of most solvents is



Test tubes show amount of a particular solvent which, if volatilized and distributed evenly, would give a concentration in a space 10x10x10 ft. equal to the maximum allowable (M. A. C.) for that solvent.

Display made up by Eastman Kodak Co.

their ability to evaporate quickly at room temperature. Unless free evaporation is prevented or the vapors are removed as quickly as they are formed, the air will soon contain a large amount of solvent vapors. Such a contaminated atmosphere can be extremely harmful when inhaled. Where atmospheric heat and humidity are high, as is often the case in textile plants, the volatility of organic solvents is increased; and whenever fabrics containing solvents are heated, in drying or finishing operations, vapors are formed in very large quantities.

When the vapor of an organic solvent is inhaled in high concentrations, it acts as an anaesthetic; that is, it may cause unconsciousness. Breathing of lower concentrations which cannot produce unconsciousness may result in symptoms such as headache, nausea, dizziness, and impairment of the powers of judgment and coordination. Continuous or repeated exposure to dangerous concentrations may cause serious damage to the liver, kidneys, blood, bones, or nervous system, depending on the particular solvent involved. Injuries resulting from solvents may cause partial or total disability, and deaths are sometimes reported as due to the effects of solvent vapor.

Air containing sufficiently small amounts of solvent vapor can ordinarily be breathed by normal individuals with complete safety. The upper limits of safety differ for the different solvents and are expressed as *Maximum Allowable Concentrations*. These values, usually stated in terms of parts of solvent vapor per million parts of air, show the maximum concentrations which most people should be permitted to breath throughout an 8-hr. working day for an indefinite period *M. A. C.* values for the common solvents, as published by the Industrial Hygiene Division of the U. S. Public Health Service, are shown in the accompanying table. In some states, slightly different *M. A. C.* values have been established for some of the solvents.

VAPOR CONTROL. The equipment and procedure necessary to control solvent vapors depend to a great extent on the solvent used and the nature of the process in which it is employed. The safest way to prevent the vapors from mixing with workroom air is to use solvents entirely in closed systems. In this way, solvent loss is minimized and safety is assured. Where a closed system is not possible, recourse is often had to down-draft or lateral-slot exhaust ventilation at points of vapor origin.

Local exhaust ventilation is particularly useful when solvents are used to clean oil and grease spots from fabrics. Sizable tables with exhaust intakes in the form of long slots around the edges can readily be installed and use for all cleaning work. In units of this type, advantage is usually taken of the fact that most solvent vapors are heavier than air; and the exhaust inlets are placed low and designed so that the vapors flow downward through them.

Special ventilating installations can be made ineffective by bad work procedure. Solvents should be poured without spilling or splashing and should be used economically. Solvent containers must be kept closed; and workers involved in operations such as spot removal should be given individual cans with safety covers, rather than open vessels, to hold the cleaning fluid. They should be taught to keep the cans closed as much as possible and to avoid leaning too closely over their work.

The advice of a competent ventilating engineer will be needed in order to determine the requirements for safety in any particular plant. He will, of course, consider the fire hazard as well as the health hazard in making his recommendations and drawing up his plan

(*Continued on page 206*)

Maximum Allowable Concentrations of Some Common Solvents

Solvent	M. A. C. in ppm
Acetone	200 [1]
Benzol (Benzene)	100
Benzine	1000
Carbon tetrachloride	100
Carbon disulfide	20
Tetrachlorethylene	200
Trichlorethylene	200
Toluene	200
Petroleum naphtha	1000
Turpentine	200

Except as indicated, all figures are according to Industrial Hygiene Div., U. S. Public Health Service.
[1] As recommended in California and Colorado.

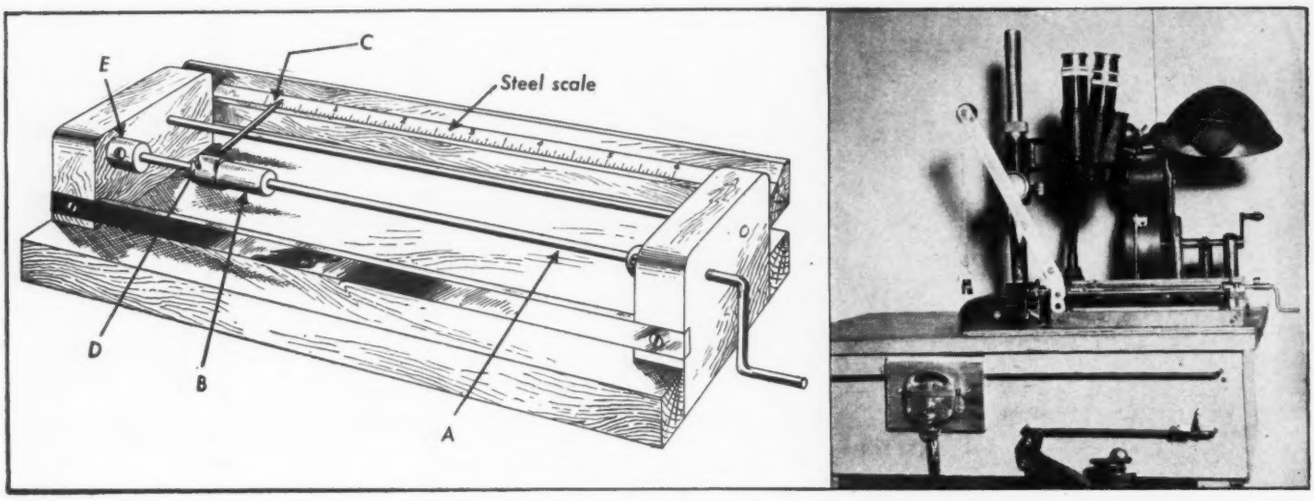


Fig. 1. The important points of the yarn coiler are shown in the drawing. To use the device, push coil compressor B to the left along rod A until the compressor touches collar E, which position will place pointer C upon zero on the measuring scale. Feed the yarn through notch D. When the crank is turned, rod A revolves within compressor B, which remains stationary. The left face of B guides the yarn into closely laid coils upon rod A, and with each revolution of the crank, B moves to the right on A a distance equal to the diameter of the yarn. This distance is indicated on the measuring scale. Improvements to the testing device (see photograph) include a weight tension for B and a binocular microscope for visually studying the coils during the winding or after they are wound on rod A.

Coil Tester Accurately Gages YARN DIAMETERS

HIGHLIGHTS: *Improved yarn-coil testing machine is useful to spinners and knitters—Number of yarn diameters per inch basis of test—Actual, rather than average, yarn number should be used in recording data—Machine is as accurate as gage or formula.*

By A. E. McKENNA

MUCH HAS BEEN WRITTEN in article and book form on yarn diameter, but there seems to be some difference of opinion on methods for arriving at the diameter of yarn. In addition to several different formulas that have been derived, several machines or testing devices have been built to indicate yarn diameter. The data and conclusions presented in this article are based on the results obtained from the operation of one of these machines.

A machine called a "yarn coiler" was devised by J. F. Cahill to wind an end of yarn on a rod in such a way as to place the coils side by side and, with the use of a pointer attached to the coil compressor and a ruler attached to the frame of the machine, to indicate the yarn diameter by the number of coils per inch. The coils are counted by counting the revolutions of the rod upon which the yarn is wound. This machine was described and illustrated in the October, 1940, issue of TEXTILE WORLD, p. 86.

Yarn No. (given)	Yarn No. (actual)	Diameters per Inch			Twist multiplier
		(Machine)	(Gage)	(Ashenhurst)	
8/1	6.7	63.2	63.1	69.3	4.75
	7.6	69.6	66.4	73.6	
	8.0	68.0	70.7	75.4	
12/1	10.9	84.0	86.9	88.3	4.70
	11.3	86.6	86.9	89.6	
	11.4	89.0	88.4	90.1	
22/1	20.8	124.8	117.6	121.7	4.20
	20.8	127.0	120.5	121.7	
	21.0	126.5	125.0	122.2	
36/1	34.7	154.0	153.5	157.0	4.20
	35.7	157.6	152.6	159.2	
	35.7	162.4	148.0	159.2	
44/1	43.1	170.6	170.9	174.9	3.90
	45.7	176.0	178.5	180.2	
	46.2	176.0	178.5	181.2	
60/1	58.4	206.6	205.7	203.7	3.90
	60.2	211.4	215.9	206.8	
	62.1	215.2	218.8	210.0	
80/1	76.3	241.0	243.9	232.7	3.65
	78.1	243.6	244.4	235.6	
	80.6	249.8	248.7	239.4	
100/1	99.5	278.8	280.1	265.9	3.55
	101.0	282.6	285.7	267.9	
	102.0	283.4	287.3	269.3	

Fig. 2. Diameter per inch of cotton yarns with optimum twist.

MACHINE AND PROCEDURE. The data presented in this article was obtained

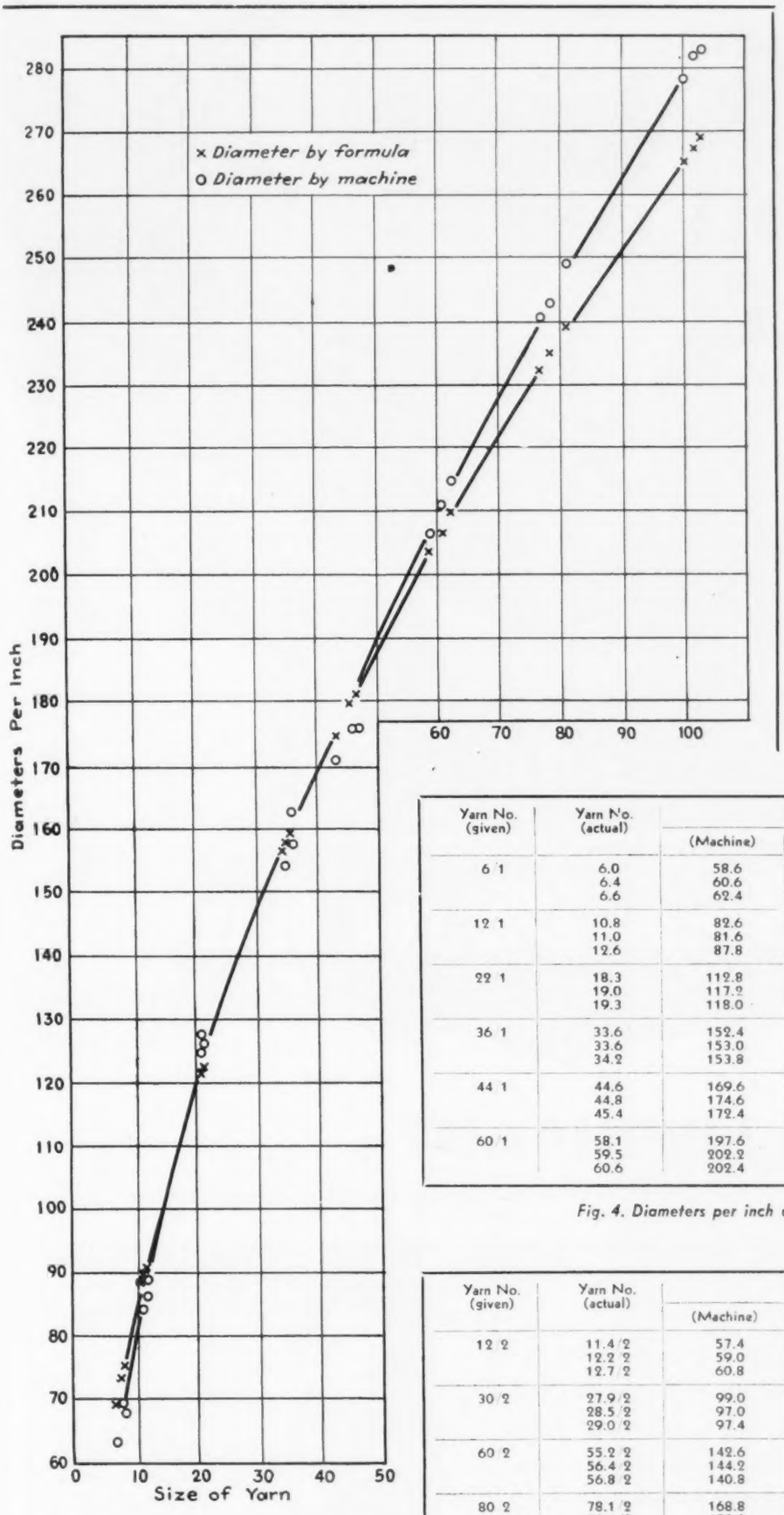


Fig. 3. The information given in graph form here is the same as shown in table form in Fig. 2.

from a machine similar to the one just described (and illustrated in Fig. 1) but equipped with a counter to facilitate the determination of the coils per inch and with devices to control the tension and compression of the yarn. The rod on which the yarn is coiled has been placed in movable bearings to facilitate the removal of the rod for diameter measurements with a thickness gage at right angles to the coil measurements.

These control devices make it possible to obtain a round yarn. Coil compression on regular-twist yarns can be made to offset the flattening effect of the winding action. Gage measurements were used only to check relative roundness of the yarn. Experience with this thickness gage indicated large possibility of error as a result of individual manipulation, yarn flattening, and yarn variation. It was not possible to coil very low-twist yarns, such as rayon with two turns per inch of twist, and retain a round yarn. In later experiments, yarns will be allowed to flatten to obtain the effect of fabrication. A wide-field, binocular microscope was used with this machine to check the coil relationship visually. All testing was done in an air-conditioned laboratory under standard conditions.

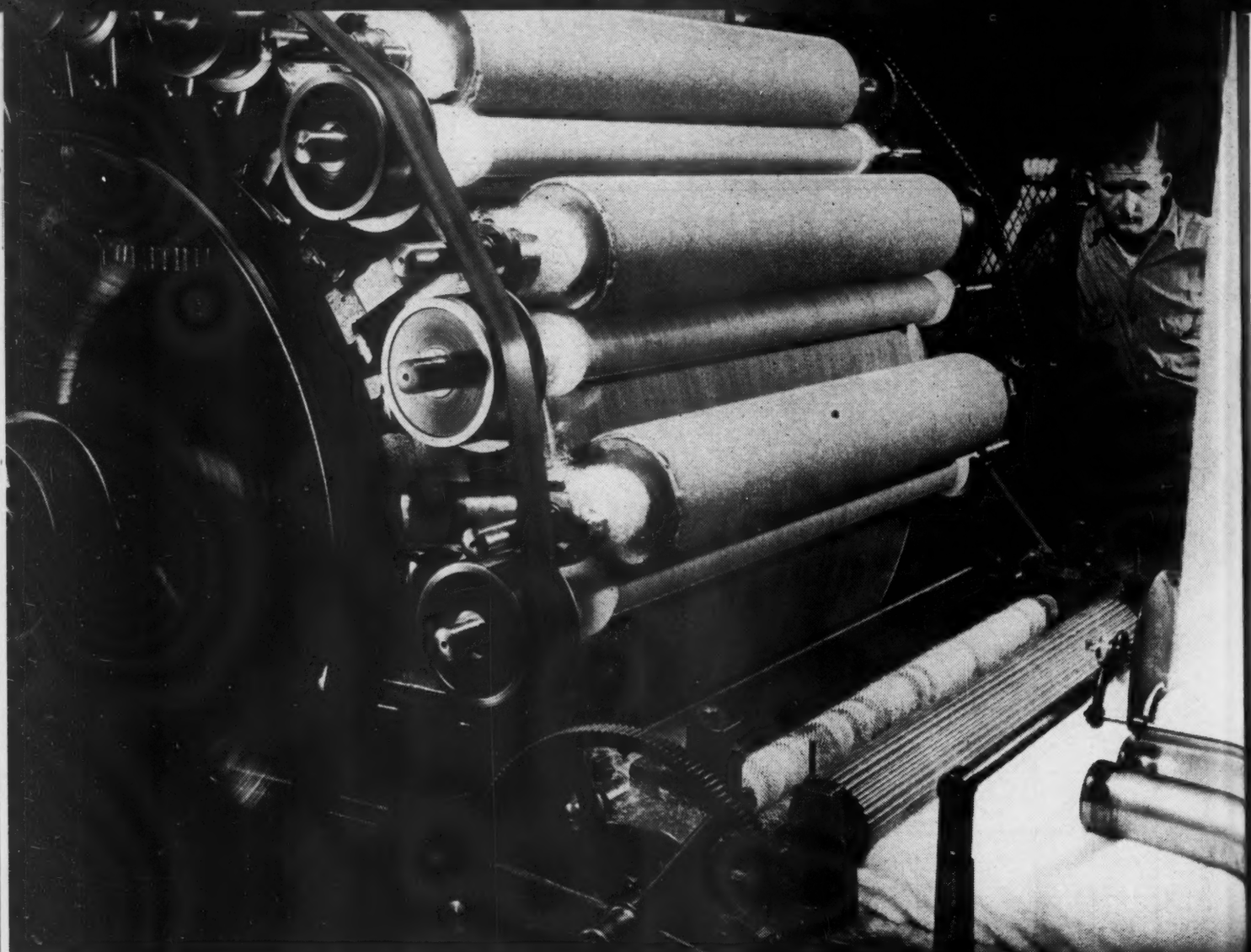
(Continued on page 190)

Yarn No. (given)	Yarn No. (actual)	Diameters per Inch			Twist multiplier
		(Machine)	(Gage)	(Ashenhurst)	
6 1	6.0	58.6	61.1	65.5	3.00
	6.4	60.6	69.8	67.2	
	6.6	62.4	61.3	68.4	
12 1	10.8	82.6	82.9	87.6	3.00
	11.0	81.6	81.9	88.4	
	12.6	87.8	90.9	94.6	
22 1	18.3	112.8	110.3	114.0	3.00
	19.0	117.2	110.7	116.2	
	19.3	118.0	111.8	117.1	
36 1	33.6	152.4	152.2	154.5	3.00
	33.6	153.0	154.3	154.5	
	34.2	153.8	153.4	155.9	
44 1	44.6	169.6	167.2	178.0	3.00
	44.8	174.6	168.9	178.4	
	45.4	172.4	170.9	179.5	
60 1	58.1	197.6	197.2	203.2	3.00
	59.5	202.2	202.8	205.6	
	60.6	202.4	201.2	207.5	

Fig. 4. Diameters per inch of cotton yarns with soft twist.

Yarn No. (given)	Yarn No. (actual)	Diameters per Inch			Twist multiplier
		(Machine)	(Gage)	(Ashenhurst)	
12 2	11.4 2	57.4	63.6	63.6	3.10
	12.2 2	59.0	68.7	65.9	
	12.7 2	60.8	66.6	67.0	
30 2	27.9 2	99.0	100.0	99.4	3.50
	28.5 2	97.0	101.1	100.7	
	29.0 2	97.4	101.1	101.2	
60 2	55.2 2	142.6	145.1	140.0	4.50
	56.4 2	144.2	148.5	141.4	
	56.8 2	140.8	153.1	141.8	
80 2	78.1 2	168.8	170.6	166.6	4.75
	78.1 2	170.0	173.9	166.6	
	79.6 2	170.6	172.4	168.2	

Fig. 5. Diameters per inch of two-ply cotton yarns.



THIS GREASE *Hangs On* FOR GEAR LIFE

SUN TEXTILE LUBRICANT...

Protects Gears and Cams on Spinning-Frames, Ends Excess Wear and Tear

An eastern mill found that wear and tear on machine gears was greatly reduced after they changed to an adhesive Sun grease that stayed on the job.

Previous lubricants had dripped off, leaving the gears without sufficient protection. The drippage also got on the work and on the floor.

The Sun grease, however, because of its adherent qualities, provided positive protection against wear. Gear tooth pressures did not squeeze it out . . . operating-speeds could not throw it off.

For "Job-Proved" lubricants that stay put, that help speed up production and cut down delays, call the Sun Engineer near you, or write . . .

SUN OIL COMPANY • ***Philadelphia 3, Pa.***

Sponsors of the Sunoco News-Voice of the Air — Lowell Thomas

SUN

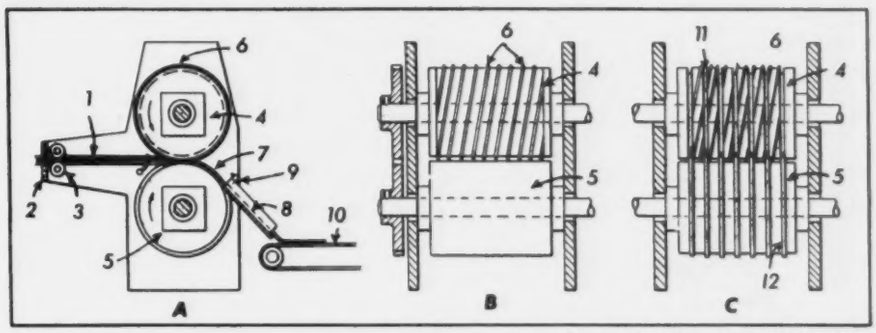
SUNOCO

INDUSTRIAL PRODUCTS

CARDING and COMBING of Staple Fiber ELIMINATED

HIGHLIGHTS: *"Greenfield" method used in England since 1939—Produces sliver direct from tow—Uniformity of product equals combed sliver.*

By A. J. KERNAN



(Courtesy H. Ashton and Courtaulds, Ltd.)

Fig. 1 (A). Tow is cut in passing between rollers, then carried to gilling by apron. (B). V-shaped cutters spiral around top roll. (C) Guides on rolls permit cutting six tows simultaneously.

TOW-TO-TOP CONVERSION, or sliver making without carding or combing, is achieved by a machine developed in England by Courtaulds Ltd. The resulting product is known as the "Greenfield" top, the name being taken from one of Courtauld's plants. In the Greenfield method, the original filaments, in one form or another, are passed between a pair of rotating rollers, one having a smooth surface and the other having on its face a number of protruding V-shaped cutters with flattened edges. The cutters are usually on the upper roller and disposed obliquely. The cut material is conveyed directly to drawing devices, and the carding process eliminated.

As a result of British experience over the past decade, modifications or additions have been made to this system from time to time; as, for example, the passing of an untwisted bundle of parallel cut fibers first through a gill box and then, while still maintaining the untwisted state, through drafting rollers. Further, the design of the funnel through which the cut material is ushered to the gill box has been altered by giving it an acute-angled edge. This permits it to be fitted closely against the lower of the two rollers. Finally, the rollers themselves have been ridged in order to keep within a limited space the material which passes through them. All these improvements have been patented by Courtaulds Ltd. and others.

The drawings (Fig. 1 A, B, C) bring out the distinguishing features of the cutting device, the object of which is to produce an even, coherent, and draftable sliver of cut filaments of equal length.

As seen in Fig. 1, the tow (1) enters through the guide (2) and is led between the tension rollers (3) and the hard steel rollers (4 and 5) which perform the cutting operation. The ridges (6) on the steel rollers are of such depth that the distance between the faces of the rollers is about 0.06 in., whereas the diameter of the tow as it is delivered under tension is about 0.37 in. The cutting rollers are driven at equal peripheral speeds; the tension rollers are driven at a peripheral speed slightly less than that of the steel rollers so that tension is put on the tow. The staple fiber (7), which has undergone a flattening process, passes through the funnel (8)—acute-angled funnel edge

(Continued on page 192)

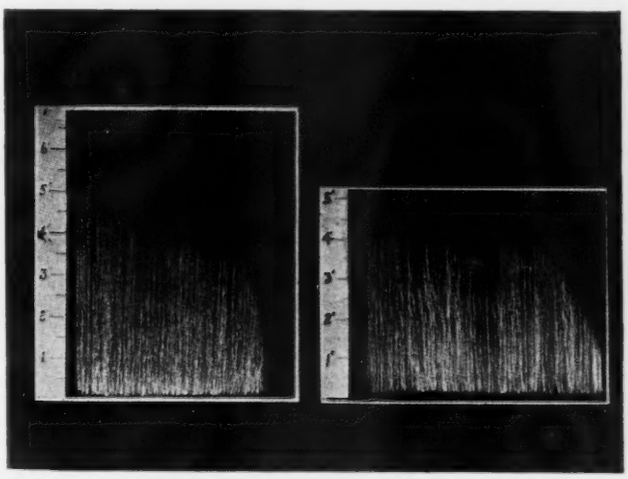


Fig. 2. Greenfield top (right) of 4½ den., 4 in. staple, is not so uniform as the combed staple top (left).

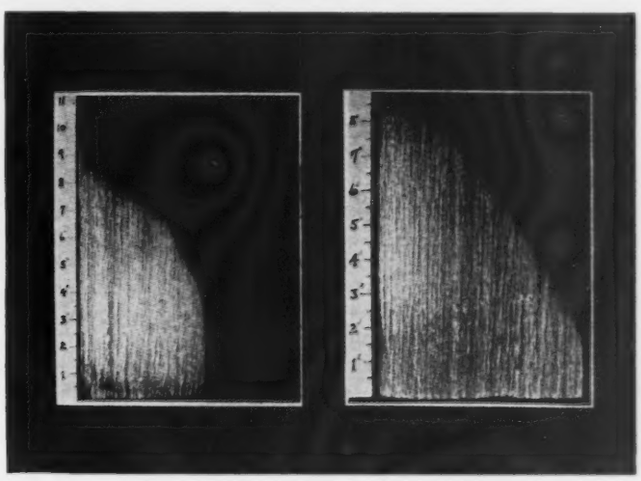


Fig. 3. Standard combed staple of den., 8 in. (left) compared to Greenfield top (right). Note that scale is different.

NEXT-DOOR service on steel

Quick deliveries to your plant

ELEVEN Ryerson Steel-Service Plants provide unmatched facilities virtually next door to every steel user in the principal markets of the United States. Though many sizes are missing because of the steel shortage, each plant has large, diversified stocks. Each is backed up by the inventories and facilities of the others. These strategically-located steel stocks plus modern high speed equipment are your assurance that orders will be filled accurately and promptly.

Ryerson metallurgists and engineers provide reliable help in solving problems of selection and fabrication. Questions of heat treatment are answered by the hardenability report sent with each Ryerson alloy shipment.

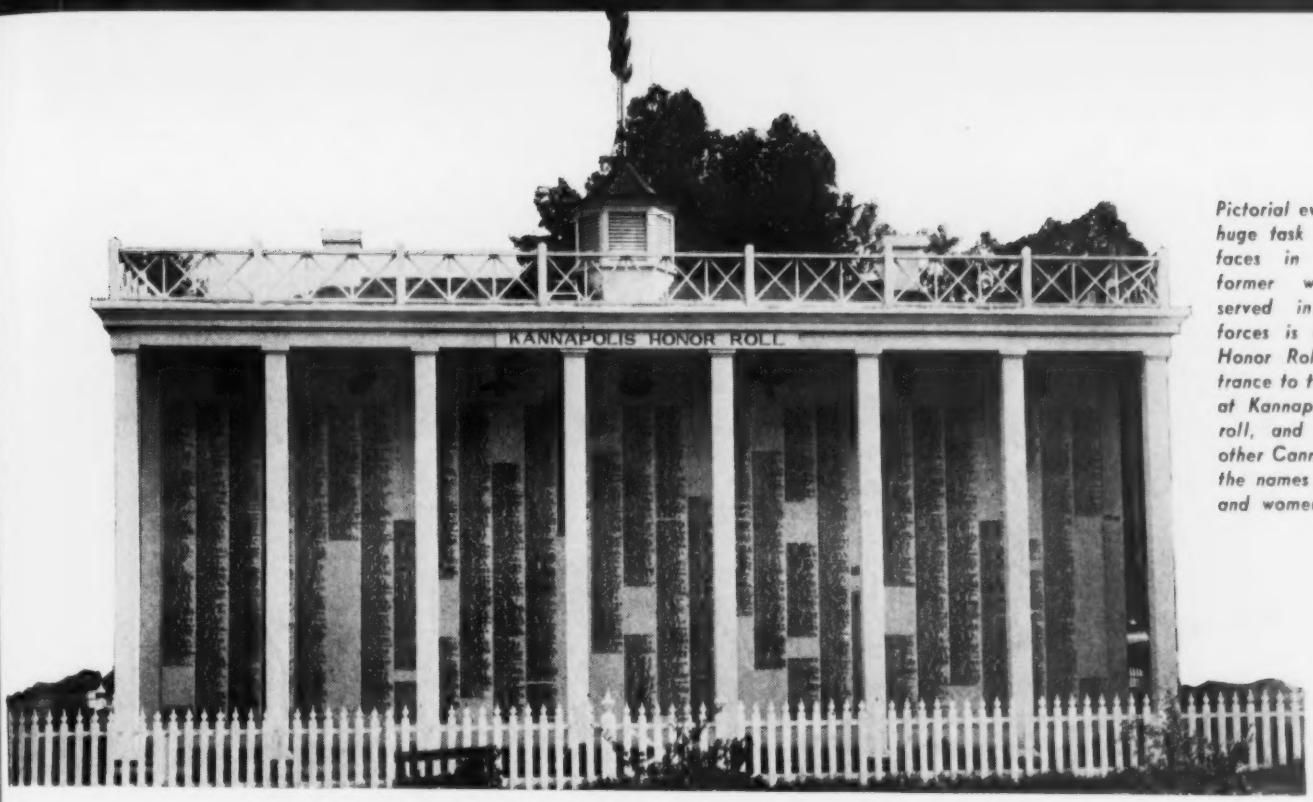
Complete, trouble-saving service on steel from stock is available to you at every plant in the Ryerson network. When you need steel of any kind call Ryerson.

Joseph T. Ryerson & Son, Inc., Steel-Service Plants: Chicago, Milwaukee, St. Louis, Detroit, Cincinnati, Cleveland, Buffalo, Pittsburgh, Philadelphia, New York, Boston.

PRINCIPAL PRODUCTS

Carbon and Alloy Steels, Allegheny Stainless, Tool Steel, Bars, Plates, Sheets, Structurals, Mechanical Tubing, Inland 4-Way Floor Plate, Reinforcing Bars and Accessories, Boiler Tubes, Welding Rod, Babbitt, Bolts, Rivets, Metal Working Tools & Machinery, etc.

RYERSON STEEL



Pictorial evidence of the huge task Cannon Mills faces in re-employing former workers who served in the armed forces is given by this Honor Roll at the entrance to the main plant at Kannapolis. On this roll, and on those of other Cannon plants, are the names of 5,237 men and women.

Cannon Mills Offers HELP TO VETERANS

HIGHLIGHTS: *Special re-employment office at Kannapolis, N. C., plant aids returning workers in making transition back to civilian life—New positions found for those disabled in service.*

By HAZEL M. TROTTER

A SPECIAL SERVICEMEN'S DEPARTMENT set up at Cannon Mills, Kannapolis, N. C., is providing returning veterans with a welcome that will endure long after the parades are over and the bands have stopped playing.

It was established in February, 1944, by Charles A. Cannon, president of Cannon Mills, in the belief that former servicemen have a right to more than what the government prescribes in the way of re-employment assistance.

Since that time hundreds of the 5,237 Cannon workers who went into the armed forces have been processed through the special department. Most have gone back into their old jobs, or similar ones. Others have been given new jobs at their own request. And for those who returned with handicaps, new

(Continued on page 194)

Charles A. Cannon (at right), president of Cannon Mills, who conceived the company's plan for helping former employees back from the war resume their mill work quickly and satisfactorily.

Discussing plans for their return to jobs at Cannon Mills, Sergt. Marvin Weddington and Pfc. Willard Metcalf (standing) learn from Capt. Harry Cannon how the special servicemen's department which he heads is ready to do everything possible to assure them an easy "reconversion" period, either in their old positions or in such vacant new positions as they may care to try.

—back in 1820: When it was costing two million dollars a year to guard Napoleon on St. Helena and there were less than a million and a half people in the whole of New York State—ten years after the erection of the first silk mill in the United States—John Butterworth established this business in Philadelphia to serve the Textile Industry. . .

For 126 years, our entire time and effort have been devoted to developing and building machinery for the Textile Industry . . . constantly helping to achieve greater speeds and lower production costs. We have watched the Textile Industry grow from a handful of family-sized plants to its present position as America's Second Industry. We are proud to have played a part in its development.

Butterworth Service includes a complete line of Machinery for bleaching, mercerizing, dyeing, drying, printing and finishing fabrics and warps; calenders for cotton and rayon fabrics; spinning machinery for rayon filament yarns.

Butterworth Research keeps informed on the new developments in Textiles and Textile-finishing. Butterworth Engineering strives to interpret each new development in terms of Machine Design and Plant Arrangement. Write us.

BUTTERWORTH

H. W. BUTTERWORTH & SONS COMPANY, Philadelphia 25, Pa.

TEXTILE FINISHING MACHINERY COMPANY DIVISION, Providence, R. I. . . 1211 Johnston Bldg., Charlotte, N. C. . . . W. J. Westaway Co., Hamilton, Ont. . . . . ARGENTINA: Storer & Cia., Chacabuco 443-49, Buenos Aires . . . . BRAZIL: Oscar Bandler, Caixa Postal 3193, Sao Paulo. CHILE: Schneiter & Cia., Ltda., Casilla 2864, Santiago . . . . COLOMBIA: C. E. Halaby & Co., Apartado 139, Medellin . . . . ECUADOR: Richard O. Custer, S. A., Quito . . . MEXICO: I. Slobotzky, Avenida Uruguay 55, Mexico, D. F. . . . PERU: Custer & Thommen, Casilla 733, Lima. URUGUAY: Storer & Cia., Ltda., Calle Paysandu 1022, Montevideo . . . . VENEZUELA: Herbert Zander & Co., Apartado Postal 1291, Caracas.

Control of pH Aids SHRINKPROOFING

HIGHLIGHTS: *Newer processes overcome yellowing that accompanied wet chlorination—Many methods available for shrinkproofing wool but most require batch operation or other difficult features—Resin and alcoholic-caustic treatments show excellent promise.*

By HAROLD BARNES

The author of this article recently made a trip around the world studying shrinkproofing (and other finishing) processes, principally in England, the United States, and Australia. He has been active in developing shrinkproofing processes in his native country, Australia, which has much to gain by universal shrinkproofing of wool fabrics —Editor.

MUCH INTEREST has been aroused in the wool industry concerning washable wool fabrics. This enthusiasm is tempered somewhat by the nature of the various processes recommended to prevent the wool fiber from curling and felting when immersed in warm-water solutions of soap or other detergents.

Until sufficient consumer demand will support the increased cost of producing washable or shrink-resistant wool fabrics, the manufacturer will have only superficial interest in the new patented processes for shrink-proofing wool fabrics. Today, with high costs of labor, taxes, and materials, the emphasis on streamlined continuous methods of production have forced the manufacturer to consider only scantily any batch process which interferes with a continuous flow of material through the plant.

Many of the newly patented processes for shrink-resisting wool fabrics produce excellent results. However, they force the manufacturer to acquire special equipment or even to acquire a separate building for a process which uses inflammable solvents. In addition, some processes require close chemical control which most mills are not yet quite ready to accept. This attitude will change in time; but with the present high demand for fabrics, it will not happen too rapidly.

NEW PROCESSES. New patented processes which show excellent promise are the resin-impregnation and the alcoholic-caustic-solution processes. Both these processes call for special equipment and technical control. During the war, the U. S. Army Quartermaster Corps realized these difficulties and developed through research a very simple process of chlorination, requiring no special equipment and very little control, which was well adapted to hosiery mills supplying army socks. This process, using borax and hypochlorite, produced very satisfactory results for washable socks and resulted in very appreciable savings of this item for the army.

The Quartermaster process is just the type the wool cloth manufacturer would like to adopt if it could produce satisfactory results on piece goods. Unfortunately, this is not possible, as any uneven chlorination of piece goods shows up very markedly upon an inspection of the cloth after dyeing. Control of certain chemical factors must be very carefully exercised for commercially satisfactory dyed cloth. However, recent improvements in wet chlorination described in the following should be of interest to the manufacturer.

DRAWBACKS. The chief drawbacks to the wet chlorination process were: (1) Variations from batch to batch; (2) uneven application giving rise to uneven subsequent dyeing; (3) many of the colors normally used for dyeing wool were detrimentally affected if the treatment was carried out after dyeing; (4) chemical damage to the wool fiber giving rise to decrease in tensile strength, wearing properties, and resistance to alkali damage; (5) loss in weight was often considerable, depending on the variable factors in the application of the process and the type of wool being treated; (6) the wool gained a permanent yellow discoloration; (7) the chlorine liberated to the atmosphere was excessive; (8) the handle of the wool became harsh.

The discovery of the Drisol process (sulphuryl chloride in an inert solvent) and the use of gaseous chlorine for wool top (Hall process) for the production of shrink-resist wool probably were the cause of the increased interest in wet chlorination in recent years.

If any improvement was to be made

(*Continued on page 216*)

Comparison of 100% wool sock given a shrinkproofing process by the author and a 40% wool sock (top) that was untreated. Both were the same size before laundering ten times.

QUADRAFOS REPORTS — — TEXTILE FIELD

Number 2

RUMFORD CHEMICAL WORKS
Technical Service Department
PROBLEM: HOW TO IMPROVE WOOLEN AND WORSTED PIECE GOODS SCOURING.
METHOD Use 4 to 8 ounces of QUADRAFOS for each piece in the washer. In the single scour method, enter goods into QUADRAFOS liquor and scour for the usual time. In double scour, use QUADRAFOS to replace the fresh scouring soap in second scour, rinsing as before.
RESULT: Lower extractions . . . faster removal of fulling soap as well as cleaner goods.
WOOLEN AND WORSTED
COTTON
RAYON
LINEN
SILK
WOOLEN
WORSTED
TEXTILES
QUADRAFOS

Wherever soap is used in textile processing, and in dyeing, sizing and printing, QUADRAFOS* can save you time and money. Progressive textile men have found QUADRAFOS a profit-making, quality-producing answer in practically *every* processing step.

QUADRAFOS ($Na_6P_4O_{13}$) is easily handled, too: Granular can be added dry to many processes, Beads are conveniently scooped or poured, and dissolve speedily for stock solutions. You can get the complete picture of the *many* ways QUADRAFOS can help you by writing for Bulletin 140 — "Textile Processing with QUADRAFOS." For detailed information relating to any specific problem, write Rumford Technical Service Department.

QUADRAFOS

*U. S. Reg. Trade Mark for Sodium Tetraphosphate made by Rumford

RUMFORD CHEMICAL WORKS

11 NEWMAN AVE., RUMFORD 16, RHODE ISLAND

Careful Adjustments Will Reduce Seconds Due to MISPICKS

HIGHLIGHTS: *True mispick is distinguished from broken pick in that absence of filling extends full width of fabric—Usual causes are careless weaving or stop motion out of order, both correctable.*

By EUGENE P. SHREMP

ALTHOUGH IT IS POSSIBLE to weave a cut of 50 to 90 yd. of woolen or worsted fabric without a mispick, most mills are fortunate if the average is kept at one-and-a-half or two mispicks per cut. This is true despite the fact that looms are equipped with filling stop motions. These devices can get out of order and have proven to be fallible at times.

Before further discussion, it is advisable to define mispicks, inasmuch as there is some confusion in distinguishing between broken picks and mispicks. For our purposes a mispick is an absence of one or more picks of filling all the way across the fabric. And broken picks are identified as occurring where the filling is broken and the imperfection extends only part way across the cloth.

The causes of mispicks generally are limited to the following conditions: careless weaving and loomfixing, shuttles throwing crooked and slamming into the boxes, improper tension of filling, broken porcelains in the shuttle eye, and splintered or cracked shuttles.

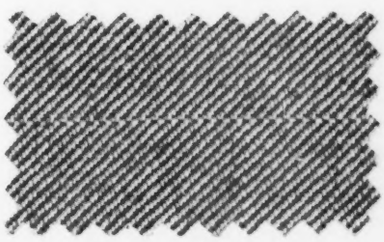
Since the action of the filling stop motion is designed to prevent the development of mispicks, it is esential that this mechanism be checked frequently and kept in good repair. The testing is simple and can be accomplished easily by breaking the filling a few turns from where it is unwinding on the bobbin, and then starting the loom. Experienced weavers and loomfixers can check the action while the loom is running. They pick up the filling and loop it over the stop motion wires with a reed hook. Frequent checking of the stop motion will save a lot of pickouts.

In addition to these checks, which should be routine, a complete inspection should be made when the warp comes out. After repairing or adjusting any motion that might interfere with stop motion operation, loomfixers should make a test run to see that the loom stops properly when the filling breaks. This is true particularly after tightening friction adjustments. Shipper and brake handles always should knock off easily.

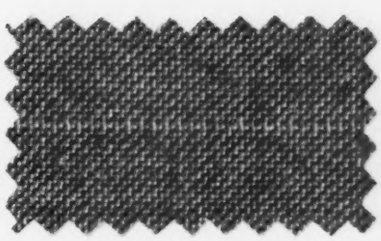
Mispicks will also be caused by weak and tender filling and poor winding. Winders should keep any knot on the outside of the bobbin. A knot close to

(Continued on page 212)

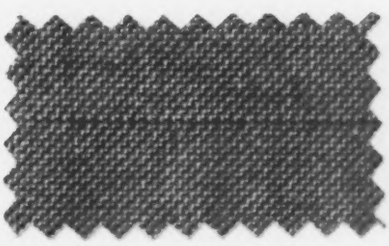
TYPICAL MISPICKS IN WOOL GOODS



2 up, 2 down twill; white warp, black filling.

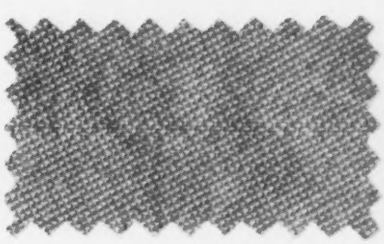


Pick and pick suiting; absence of black pick.

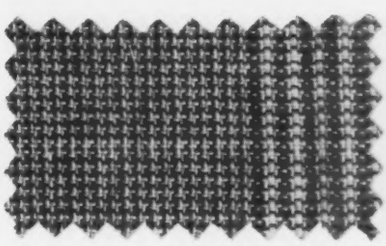


Pick and pick suiting; absence of white pick.

3 up, 1 down twill; on face mispick looks like a harness skip.



3 up, 1 down twill; on back mispick entirely different from appearance on face.

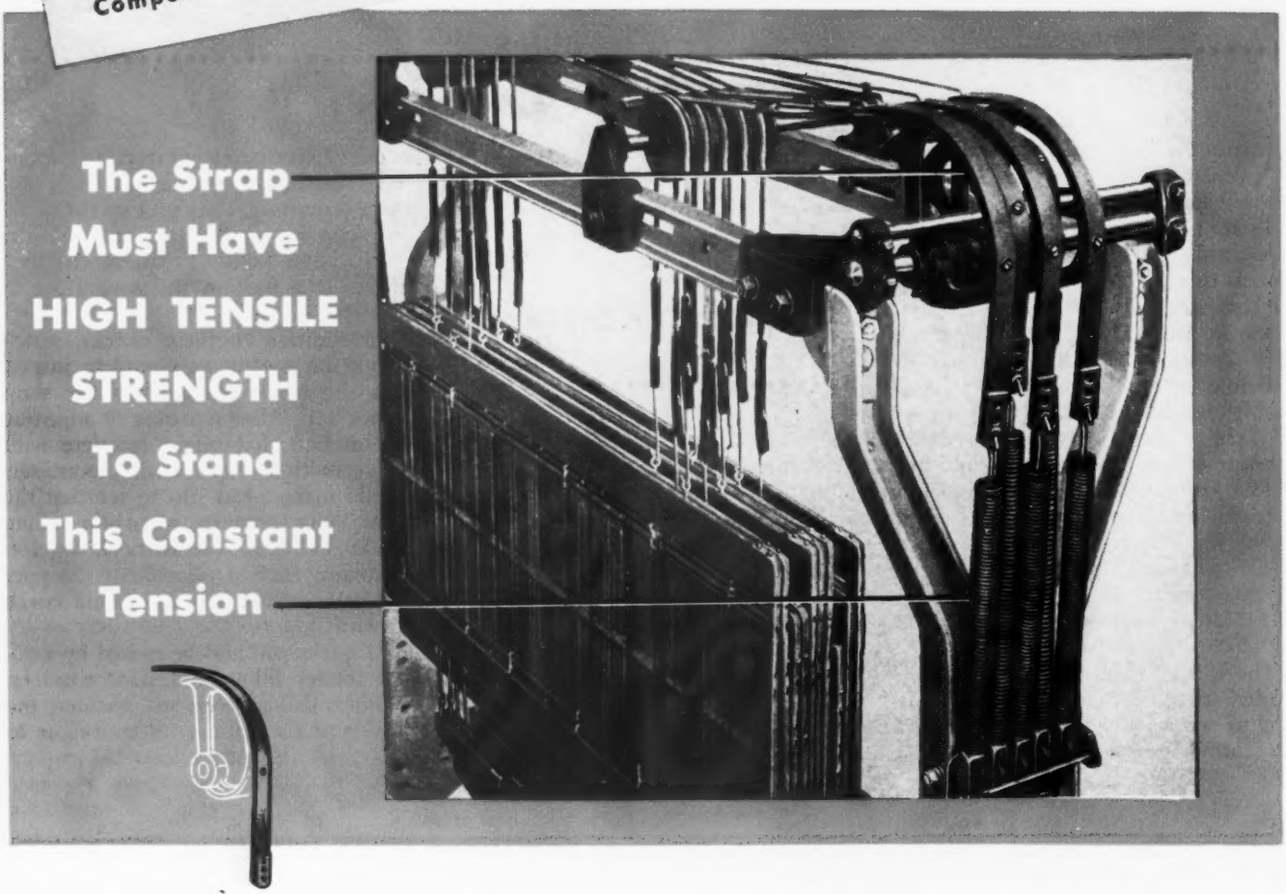


Fancy over-plaid, split basket weave; mispick leaves light place.

LOOM LEATHER POINTERS No. 3

Compensating Sheave Straps

The third in a series discussing the performance requirements of loom leathers



The Problem: to withstand tension applied alternately by the cam action on the treadle and the retracting action of the coil spring.

Service Requirements: high tensile strength because the Straps are under constant tension from the Harness Springs . . . no stretch in order to keep harness level and eliminate frequent adjustments . . . high tear resistance so that the hook on the Harness Spring will not tear through the leather.

The Solution: Graton & Knight's "Hairitan" leather, furnished hairless for this purpose to keep the warp clean. This superior tannage develops uniformly high tensile strength, and each lot is tested to make certain it has the required tensile strength. Because "Hairitan" comes from the center of the hide, the closely knit fibres provide the minimum stretch requirements and maximum tear resistance.

"Hairitan" leather is also recommended for the Harness Straps which connect the Harness Cords and the top of the Harness, as well as for all loom strapping where strength, resiliency and durability are required.

All products in Graton & Knight's ORANGE LINE of "Hairitan" loom leathers — pickers, check straps and other strappings — are identified by the orange color on the flesh side, which signifies one quality control from hide to loom. Write for catalog on Graton & Knight textile leathers. Graton & Knight Company, 326 Franklin Street, Worcester 4, Massachusetts.

GRATON AND KNIGHT

Orange Line Loom Leathers

A complete line manufactured by the world's largest manufacturer of industrial leathers. Supplied by the leading distributors in the textile industry. Look under "Graton & Knight" in "Belting" section of Classified Telephone Directory or THOMAS' REGISTER.

Proper HANDLING of NYLON Produces More Uniform Hose

HIGHLIGHTS: *Seamless and full-fashioned hose have same general procedure—Use of polyvinyl alcohol size requires low humidity—Courses per inch as compared with silk must be reduced—Oil spots easier to remove before preboarding—Good selvages depend on yarn tension.*

PROPER HANDLING of nylon yarns is necessary in order to produce uniform and satisfactorily fitting hose, either full-fashioned or seamless. The information given here is the result of study by Nylon Div., E. I. du Pont de Nemour & Co., to discover the best handling methods and procedures. However, each mill should consider these suggestions as a basis for further experiments under its own particular conditions, because each mill must accept the responsibility for the final product which it delivers.

The principles enumerated here have a slant toward full-fashioned knitting, but should also be considered in circular knitting, where applicable, except where differences are indicated.

YARN STORAGE AND CONDITIONING. Polyvinyl-alcohol (PVA) type water-soluble size is the type predominantly used in manufacturing nylon hosiery. When a PVA size is applied to nylon to afford better manufacturing performance and aid in pulled-thread protection, it is desirable to store the yarn in an atmosphere of 50% r.h. or less.

PVA-sized nylon should not be conditioned in moist air before knitting. It should be transferred directly from the yarn case to the knitting machine. Also, care should be taken to assure that water is not dropped on the cone during handling or knitting.

HOSIERY CONSTRUCTION. A 3-thread silk yarn represents a total of about 42 den. on the knitting machine, but in the boiled-off and dyed hose this same yarn equals about 34 den. On the other hand, a nominal 30-den. nylon yarn represents about 34 den. on the machine, due to size and oil content and partial shrinkage. It represents also about 34 den. in the preboarded, boiled-off, or dyed hose where the removal of size and oil compensates for additional shrinkage.

Silk hose knit at 50 courses per in. will count about 49 courses per in. in the boiled-off and dyed hose. Nylon hose knit at 50 courses per in. with 30-den. yarn on a 45-gage machine, will count about 53 courses per in. in the boiled-off and dyed hose. This shrinkage is induced principally by the preboarding operation.

Thus, using 30-den. nylon, to produce a hose of equal courses per inch to silk in the dyed state, it is best to knit 45-gage nylon three to four courses less per inch than silk hose. Similar proportionate reductions should be made for 48- or 51-gage. A careful evaluation between shrinkage and final course count should be made also for 40- to 70-den. yarns. This is particularly important for welt constructions where final stretchability is a critical factor.

(Continued on page 208)

Fig. 1. Good selvages are dependent on yarn tension. A greater fabric-width is obtained with a low fabric or roller-tension.

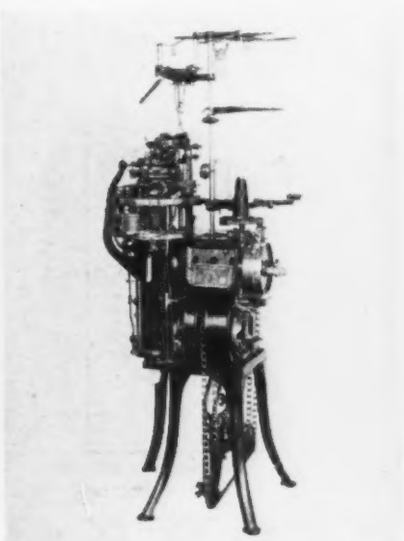


Fig. 2. Seamless hose welts can be knit tighter, overcoming stitch distortion in welts of the finished hose, by shrinking the welt yarns in hot water or steam before knitting.

Fig. 3. Add 24 to 50 leg courses, and about 24 foot courses to produce nylon hose which is same as equivalent silk size.

ORONITE CHEMICALS

Reg. U. S. Pat. Off.

THE NAME TO WATCH IN CHEMICALS

ORONITE POLYBUTENES ARE AGAIN AVAILABLE

Again in ample supply, Oronite Polybutenes are offered in seven grades for application in many diversified industrial and manufacturing fields.

Among the many special uses of Oronite Polybutenes in volume are these: for adhesive and non-drying gasket compounds, insulated and impregnated paper wrappings, rubber latex extenders, as a dust trapping agent in air filters, in treatment of leather, for paraffine wax plasticizers, in the fabrication of electrical devices, and for many other uses.

Oronite Polybutenes are carefully engineered to fill the needs of up-to-the-minute industrial and manufacturing processes. An inquiry on your business letterhead as to specific uses in your own business will bring prompt reply.

1240

TYPICAL TESTS:

	No. 8	No. 12	No. 16	No. 20	No. 24	No. 32	No. 64
Flash Point, Clev.°F.	315	340	360	380	435	500	540
Viscosity 100° F. SSU	358	3390	5425	17160	49750	167500	347600
Viscosity 210° F. SSU	52	154	210	528	1060	3065	6075
Viscosity Index	71	75	80	100	104	115	119
Pour Point °F.	—30	—5	0	10	20	40	55
Solid Point °F.	—35	—10	—5	5	15	35	50
Gravity, API	35.4	32.0	31.0	29.8	27.9	26.0	25.0
Spec. Gravity	.8478	.8654	.8708	.8772	.8877	.8984	.9042
Lbs. Per Gallon	7.059	7.206	7.251	7.305	7.392	7.481	7.529
Molecular Weight	370	530	600	700	900	1200	1500
Neut. Number	.10	.10	.10	.05	.02	.01	.01
Sap. Number	.3	.3	.2	.2	.2	.1	.1
Carbon %	0	0	0	0	0	.01	.02
Sulphur %	.01	.01	.01	.02	.02	.02	.04
Sligh Oxidation Test	0	0	0	0	1	1	2
Color ASTM (Max.)	1½	1½	1½	2	2	2	2
Dielectric Strength	35,000	35,000	35,000	35,000	35,000	35,000	35,000

ORONITE CHEMICAL COMPANY

Russ Building, San Francisco 4, California
White-Henry-Stewart Bldg., Seattle 1, Wash.

30 Rockefeller Plaza, New York 20, N. Y.
Standard Oil Bldg., Los Angeles 15, Calif.

STA Men Compare MAINTENANCE METHODS

HIGHLIGHTS: *Daily cleaning of ceiling over cards gives best results at Erwin Cotton Mills—Cleaning tent for looms decreases seconds—Permanent three-coat finish applied to floors at Patterson Mills.*

MILL CLEANING and overhauling, cleaning tools, floor finishes, and mechanical roll pickers for use in carding and spinning were examined by members of the Eastern Carolina Div., Southern Textile Assn., last month at a meeting held at the Textile School, N. C. State College, Raleigh, N. C.

Daily cleaning with compressed air around and over cards is done at Erwin Cotton Mills while the machines are in operation, A. L. Oldham, overseer of carding, reported. Brushing down walls and overhead in areas occupied by drawing and roving frames is done during the lunch hour. Formerly, overhead cleaning was done during the week-end shutdown; but because accumulated lint from the ceiling fell onto the cards, the cleaning schedule was changed. In the present daily method, a minimum of lint accumulates between cleaning periods; and while some fly may fall onto the cards, it is much less in amount than formerly; and the fly falling into the card is considered less objectionable while the machine is in operation than when the machine is stopped.

WEAVE-ROOM CLEANING. Overhead weave-room cleaning at Patterson Mills was explained by J. B. Hutchinson,

Malcolm E. Campbell, Dean of the Textile School, N. C. State College, *left*, welcomes B. M. Bowen, president of Southern Textile Assn. to the meeting of the Eastern Carolina Div., May 4, at Raleigh, N. C. Dean Campbell stressed the importance of technical meetings in evolving better mehods of manufacturing.

In Gastonia, April 19, the Gaston County Div. heard John T. Wigington, of the Cotton-Textile Institute, describe the services various agencies are performing for mills in the field of cotton-fiber technolcgy. Fifty-four technicians have been trained in regular classes held at the institute's laboratory in Clemson, S. C. Mrs. Helen G. Beasley, a'so of the institute, demonstrated the Fibrograph, the Suter-Webb sorter, and the Pressley flat-bundle fiber tester.

Fig. 1. Aluminum piping lightens the operator's load during overhead cleaning. Some mills use light, wooden poles to which the air hose are attached.

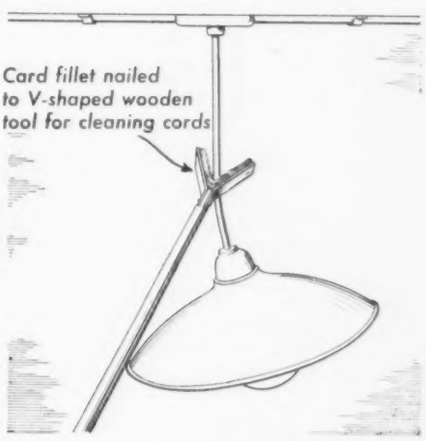
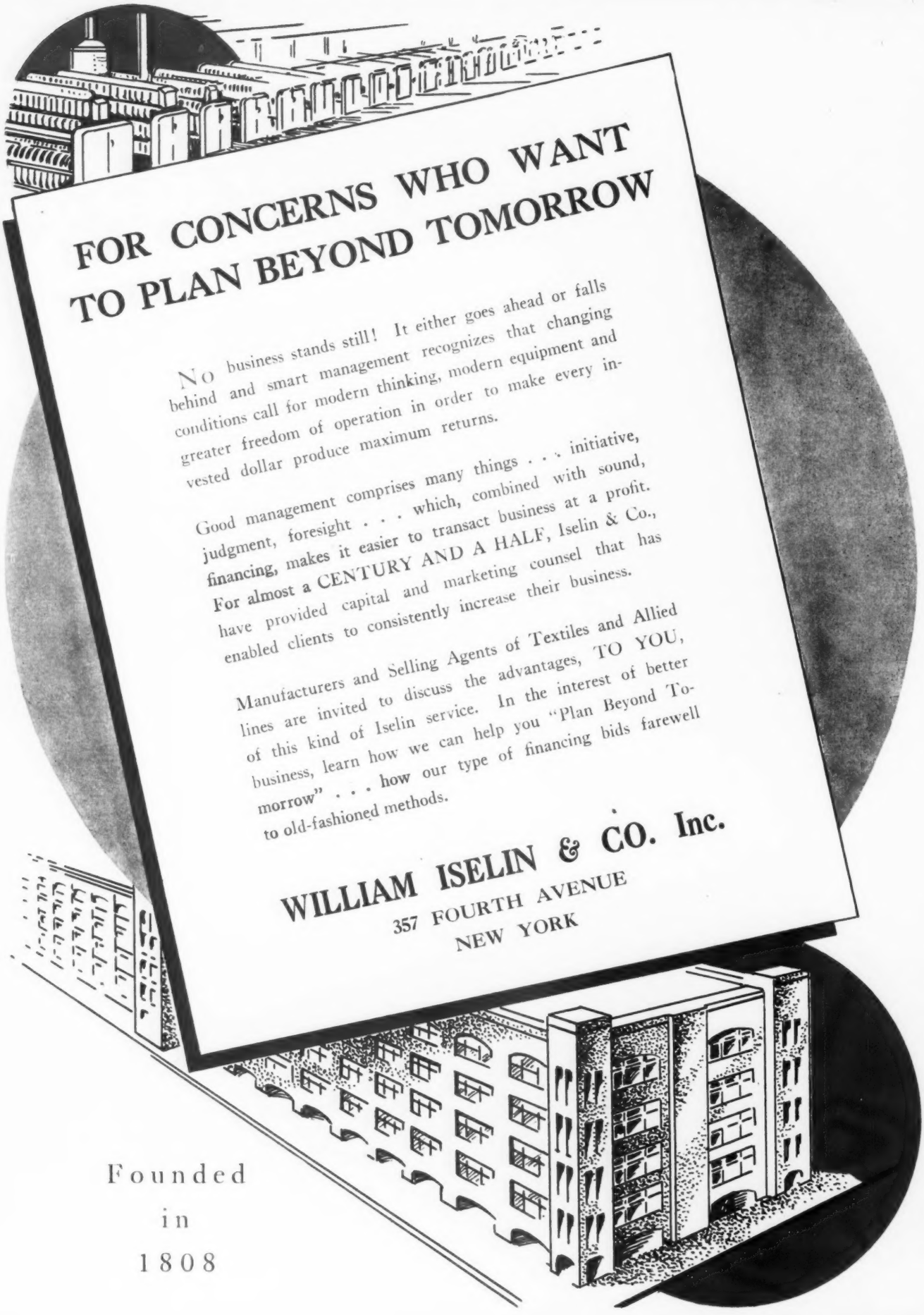


Fig. 2. Card fillet nailed to a V-shaped wooden tool is used for cleaning lint from light drop cords.



FOR CONCERNS WHO WANT TO PLAN BEYOND TOMORROW

No business stands still! It either goes ahead or falls behind and smart management recognizes that changing conditions call for modern thinking, modern equipment and greater freedom of operation in order to make every invested dollar produce maximum returns.

Good management comprises many things . . . initiative, judgment, foresight . . . which, combined with sound, **financing, makes it easier to transact business at a profit. For almost a CENTURY AND A HALF,** Iselin & Co., have provided capital and marketing counsel that has enabled clients to consistently increase their business.

Manufacturers and Selling Agents of Textiles and Allied lines are invited to discuss the advantages, TO YOU, of this kind of Iselin service. In the interest of better business, learn how we can help you "Plan Beyond To-**morrow" . . . how** our type of financing bids farewell to old-fashioned methods.

WILLIAM ISELIN & CO. Inc.
357 FOURTH AVENUE
NEW YORK

Founded
in
1808

weaving overseer. The company uses a flexible fiber brush attached to a 10-ft. handle. The tool can be looped conveniently over pipes and fixtures. To clean chain-type light pendants, the mill uses bottle brushes with wire handles twisted together in such a way as to hold the brushes in a V shape. These brushes are attached to suitable wooden handles. Fiberboard fluorescent-light fixtures at Patterson Mills are merely wiped with a dry cloth, and porcelain fixtures are cleaned with a chemical cleaner. When cleaning overhead steam unit heaters, the mill requires that a cloth curtain be hung in front of each heater to catch the dust and dirt blown from it. If not caught, the dust flies over the weave room. The heaters are cleaned by this method every three weeks the year round. The cloth curtain may be made of cotton duck hemmed at the bottom so that a metal-bar weight may be attached. Fibers attached to unit heaters also collect dust during heater operation, thus helping to reduce the required cleaning of the heater.

Tube-type, non-clogging heaters were described by Sydney Green, vice-president, Eno Cotton Mills, as effective in weave rooms where humidity, starch, and lint complicate the housekeeping problems.

MACHINE CLEANING. Looms at Erwin Cotton Mills are cleaned with compressed air while warps are out, according to C. W. Howell, superintendent. Drop wires, filling forks, and other parts are cleaned while the loom is in operation. Passage of lint and grease from one loom to another during the compressed-air cleaning is always a problem, and one member suggested a tent to cover or isolate the loom being cleaned. Elliott S. Grover, of N. C. State Textile School, stated that he has seen such a device working satisfactorily in several weave rooms.

Several cotton mills use mechanical roll pickers, and most of them report that the use of the picker is advantageous in the spinning room; but many question its advantages for use on some types of long-draft roving frames.

That some German mills had replaced the spinning scavenger roll with a pipe for receiving the broken end was reported by Dean Campbell. When an end comes down, the roving passes into a pipe attached to the roller beam, through the pipe, and into a cloth bag attached to the pipe. When full, the bag is emptied and then replaced on the pipe.

The Tennant system of floor maintenance was described briefly by one production man. Under this system, no water ever touches the floor. The floors are sanded, finished with a penetrant, and periodically dry cleaned with special equipment.

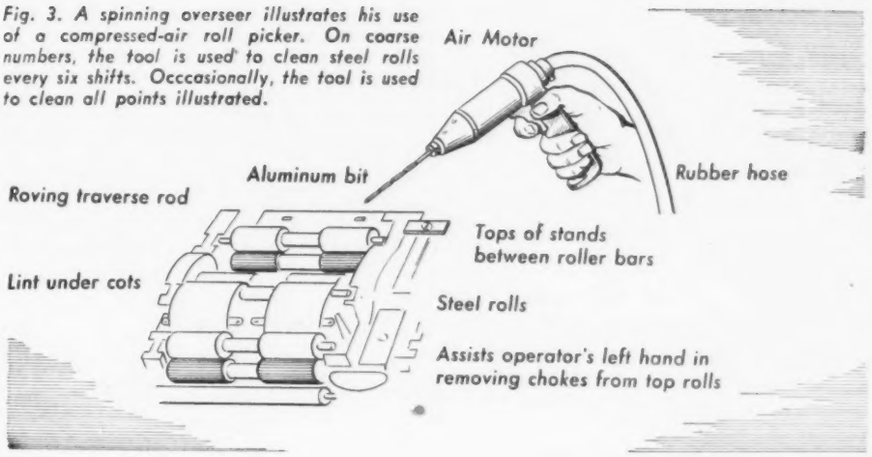


Fig. 3. A spinning overseer illustrates his use of a compressed-air roll picker. On coarse numbers, the tool is used to clean steel rolls every six shifts. Occcasionally, the tool is used to clean all points illustrated.

Most mills use some system of scrubbing floors. However, Patterson Mills, Roanoke Rapids, uses a permanent floor finish in filling, spinning, winding, and warping departments. The hardwood floors were sanded and coated three times with the finish. Periodic cleaning is done with a Dupont cleaning agent in solution with water. The solution is applied with a hand mop.

OVERHAULING. The system of overhauling used by Erwin Cotton Mills was described by Luther T. Rasberry. Cards are overhauled by grinders at each grinding, which occurs approximately every 30 days. Picker-room fixers are furnished with a helper twice a year in order to overhaul. Regular overhauling crews are maintained in carding and spinning.

Edward C. Horner, carding and spinning overseer, Oxford Mills, removes drawing rolls once each week for a thorough cleaning. This practice lengthens the cycle of general drawing-frame cleaning to once a year, rather than twice a year.

Overhauling of cards and drawing frames at Patterson Mills, according to J. R. Meikle, is followed up by laboratory testing. The sliver tester is used in order to determine whether or not the machines have been properly set up during overhauling.

Spinning overhauling at Rosemary Mfg. Co. was described by Wiley D. Connell. During roll scrubbing, the overhaulers use a cloth apron under the roller rack to catch dirty and greasy waste removed from rolls and roll stands. The cloth apron extends the length of the frame and is fastened to the weight-lever screws and to one edge of the roller rack.

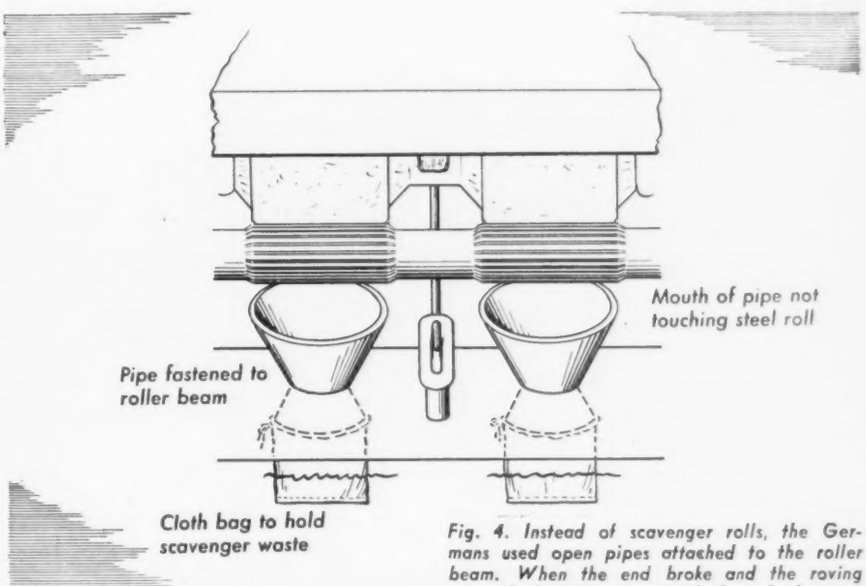
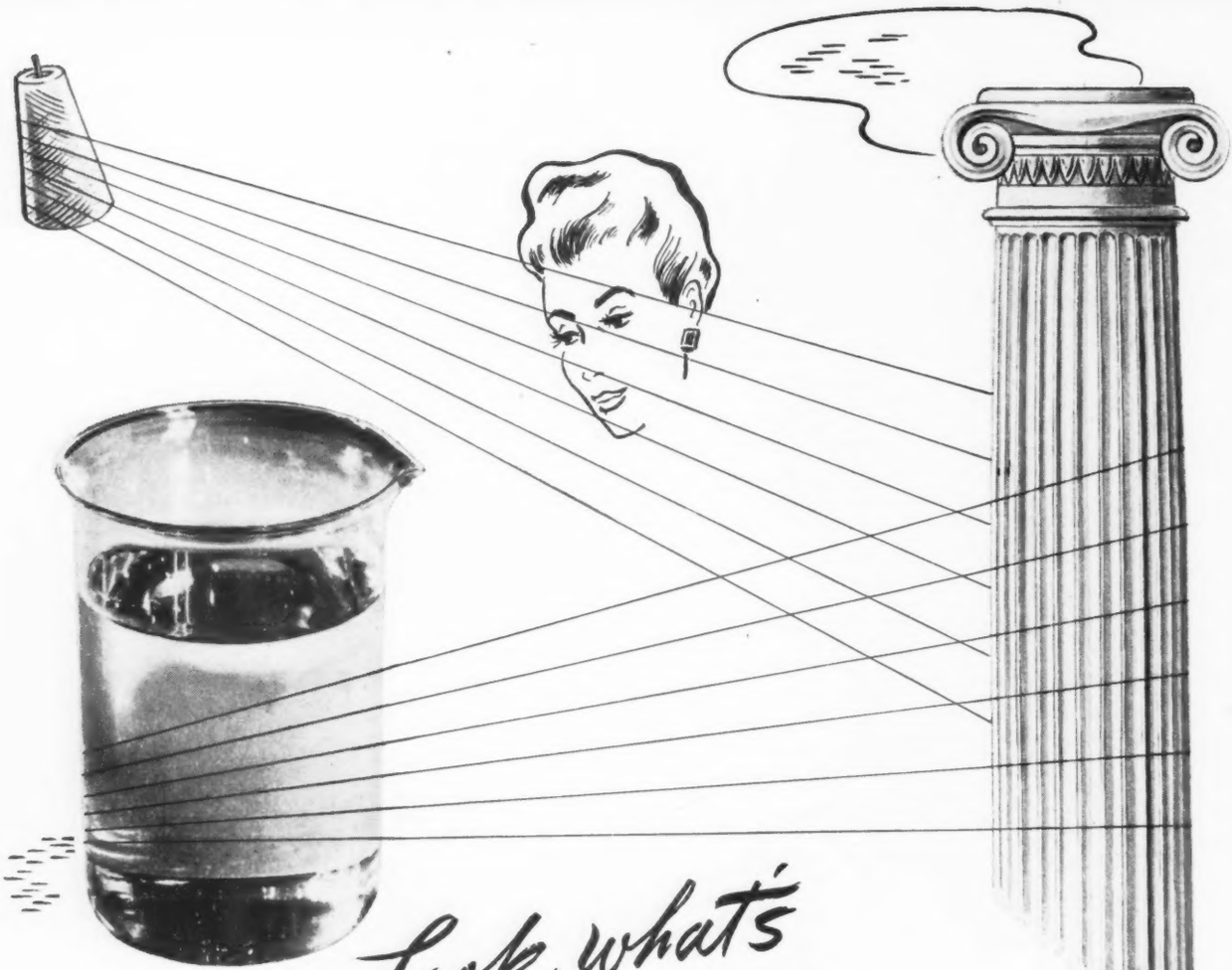


Fig. 4. Instead of scavenger rolls, the Germans used open pipes attached to the roller beam. When the end broke and the roving entered the pipe, it passed through the pipe into a cloth bag.



Look what's in Fashion these days!

Water is right! With chemical processing to the fore in the textile industry, water is more important these days than ever. And not just any kind, but *high quality water.*

The many new fibres are presenting new processing problems. Impurities in ordinary water could easily disturb chemical reactions, spoil the finish of fabrics, cause spotty, off-color dye-lots.

That is why, in mills that have perfected the new techniques and are in production on post-war fabrics, you're likely to find Permutit.*

Water conditioning by Permutit *removes* the impurities in natural water supplies . . . gives a textile plant complete control over the quality of its process water which means, of course, control of the finished product, too.

Finer fabrics . . . more efficient mill operations—certainly *these* make it worth your while to investigate Permutit equipment.

Write at once to The Permutit Company, Dept. T6, 330 West 42nd St., New York 18, N. Y. or Permutit Co. of Canada, Ltd., Montreal.

*Trademark Reg. U. S. Pat. Off.

FOR MORE THAN 30 YEARS **PERMUTIT**

WATER CONDITIONING HEADQUARTERS

Recently Released Figures Confirm VAT DYE GAINS

HIGHLIGHTS: *Over one-half wartime dye increases accounted for by anthraquinone vat colors—Government figures show course of dyestuff industry during 3-year war period—Consumption peak lagged almost a year behind top of production curve.*

ANTHRAQUINONE VAT DYES accounted for one-half the increase in consumption of all dyestuffs during the period from July, 1942, until June, 1945, according to figures released this month by the Bureau of the Census. The course of the dyestuff industry during the 3-year period is shown by Facts for Industry series 32-15-1, based on WPB data collected from all known dye manufacturers. The tables at the bottom of the page present the WPB data in slightly condensed form.

Dyes for military fabrics, in large part anthraquinone vat dyes, naturally showed the sharpest rise, and reached a consumption peak in the first quarter of 1944. Other classes of dyes showed smaller gains or even losses, but the all-over trend was one of gradual increase in consumption to a peak early in 1945.

The question of whether or not the increased use of vat colors can be maintained in the commercial market, now that the war is over, is one that should interest both dyers and dye-makers. A long-time campaign on the part of some interested parties to increase the use of fast colors would be a step nearer fruition if the position of vats can be held at anywhere near the high level indicated by the government data.

The fact that the latest figures in the report are now a year old and the subsequent transition from government to private markets are deterring factors in the projection of the picture to the present day and beyond. However, the following points brought out by the tables do show a trend.

TRENDS INDICATED. At the peak in consumption of all dyes in the first quarter of 1945, anthraquinone vat dyes accounted for 52.8% of the increase in the dollar volume, and of the all-over increase during the total 3-year period, they accounted for 60.3%. Thus, at a time when cut backs of government orders were already underway, vat dyes increased their percentage of the total by 7.5%. However, it should be noted, that the peak for all dyes occurred exactly a year after anthraquinone vat dyes passed their peak and began to decline. Early in 1943, when anthraquinone vats were at their peak, they accounted for 77.5% of the increase.

Indigo and related vat dyes follow the general pattern set by the anthraquinone vat colors, rising to a peak in early 1944 and then declining to the end of the period covered.

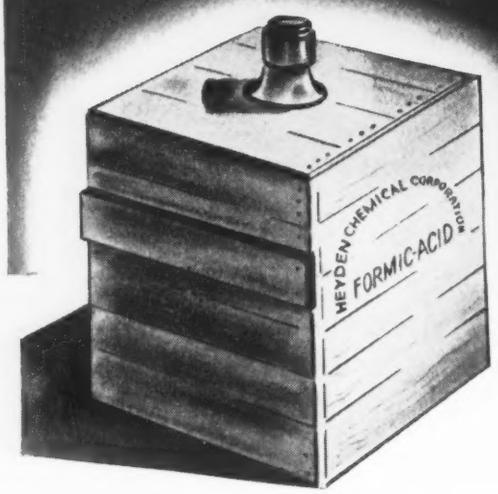
The poorest showing, was made by phthalocyanine dyes, which in 1943 dropped to 21% of their initial volume, but regained partially at the end to 32.7%.

Basic colors showed an increase which continued steadily throughout the 3-year period, while azoic dyes were rather irregular. Azo colors as a class, and sulphur dyes both lost volume.

FIGURES ON DYESTUFF INDUSTRY SHOW WAR-STIMULATION

	Period	Total All Dyes *	Anthraquinone		Azo			Basic	Indigo & Other Vat	Azoic	Sulphur	Phthalo-cyanine	All Others
			Vat	Others	Direct, Developed	Mordant & Chrome	Others						
U. S. Production *(in thousands of pounds)*	2nd half 1942	67,718	13,051	2,572	13,375	3,695	6,993	2,749	9,232	2,034	9,470	1,099	3,448
	1st half 1943	76,832	17,468	2,256	12,828	4,200	7,892	3,436	9,496	1,878	11,637	1,091	4,650
	2nd half 1943	77,206	18,438	1,768	13,393	3,013	9,844	3,042	10,378	1,802	9,732	1,057	4,739
	1st half 1944	88,672	21,076	2,427	14,432	3,377	11,033	3,702	12,356	1,594	11,102	1,663	5,909
	2nd half 1944	80,929	19,680	2,743	14,607	3,630	11,476	3,751	8,761	2,207	9,038	1,477	4,549
	1st half 1945	81,943	18,535	3,661	13,166	4,553	12,504	3,810	7,796	2,420	9,184	1,608	4,742
Stocks on Hand *(in thousands of pounds)*	2nd half 1942	37,467	4,786	1,789	9,070	2,222	5,362	1,744	4,105	1,148	4,760	371	2,110
	1st half 1943	37,181	6,305	1,584	7,480	1,903	4,558	1,644	3,620	1,099	6,035	327	2,328
	2nd half 1943	35,567	6,837	1,001	6,905	1,705	4,378	1,568	3,506	1,369	5,026	416	2,856
	1st half 1944	35,897	7,002	955	6,723	1,598	4,415	1,477	3,658	1,016	6,078	715	2,260
	2nd half 1944	33,786	7,384	1,054	7,316	1,403	4,172	1,423	3,848	892	4,975	485	1,834
	1st half 1945	32,437	6,500	936	7,116	1,975	4,173	1,180	2,999	817	4,783	297	1,655
Shipments, U. S. & Canada *(in thousands of dollars)*	2nd half 1942	49,906	16,798	1,844	4,702	1,696	10,561	2,140	1,945	1,823	2,209	3,996	2,192
	1st half 1943	56,165	21,324	2,640	8,661	2,637	5,490	3,623	2,995	2,204	2,447	839	3,305
	2nd half 1943	58,550	23,822	3,804	8,290	1,731	6,469	3,687	2,372	1,777	2,176	977	2,945
	1st half 1944	64,390	27,358	3,850	8,154	1,812	7,286	4,390	3,233	1,825	2,050	1,300	3,382
	2nd half 1944	61,500	24,036	4,413	7,802	1,821	7,738	4,657	2,606	1,918	1,654	1,195	3,660
	1st half 1945	66,577	26,156	5,555	7,968	2,201	8,617	5,164	2,326	1,954	1,714	1,254	3,668
Exports *(in thousands of dollars)*	2nd half 1942	4,072	558	329	845	86	351	207	241	716	533	48	158
	1st half 1943	3,498	512	108	752	113	327	371	299	520	194	106	206
	2nd half 1943	3,358	447	121	689	111	287	369	289	417	268	109	151
	1st half 1944	4,134	472	95	937	129	406	505	373	547	358	155	156
	2nd half 1944	5,574	571	139	1,302	168	479	555	471	1,021	529	172	167
	1st half 1945	4,825	564	176	1,022	158	351	453	362	1,084	418	123	114

Formic Acid-Heyden



Shipped in Glass Carboys
125 lbs. net weight

Prompt return of Carboys helps speed up our service to you and our other customers.

FOR THE TEXTILE INDUSTRY...

As an acidulant in the dye bath—for wool, cotton, silk, etc. Recommended where overstrong mineral acids prevent good penetration and levelness. Heyden Formic Acid will not reduce tensile strength of fabrics.

IN TANNING OF LEATHER...

to remove lime from pores of bated hides and to conserve hide substance. With the grain side cleaner, leather will have more even color.

IN LAUNDRY WORK...

as sour, to guard against yellowing of fabrics in process of ironing.

FINE HEYDEN CHEMICALS

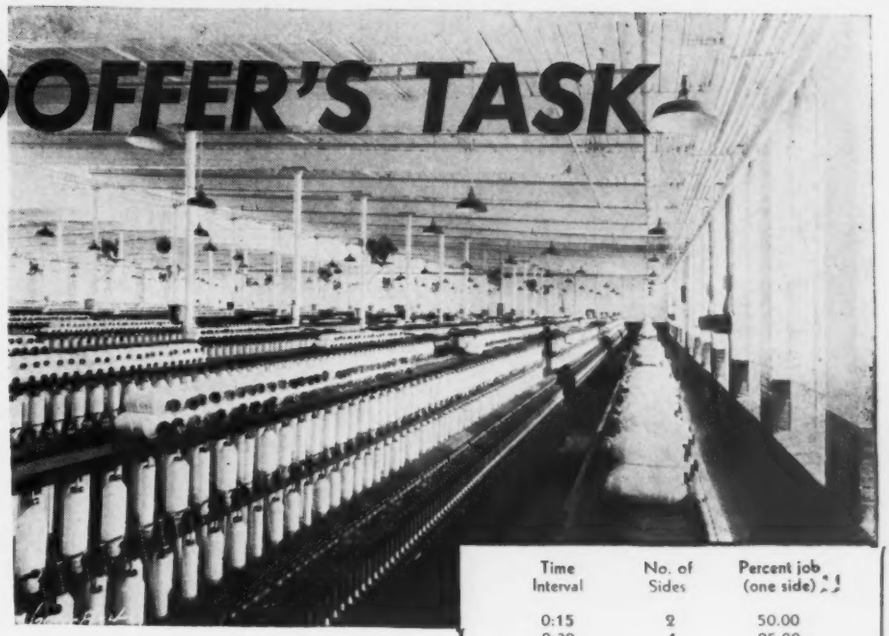
HEYDEN *Chemical Corporation*

393 SEVENTH AVENUE, NEW YORK 1, N. Y.

Chicago Sales Office: 180 N. Wacker Drive, Chicago 6, Ill.

Benzaldehyde • Benzoates • Benzoic Acid • Benzyl Chloride • Bromides • Chlorinated Aromatics • Medicinal Creosotes • Formates • Formaldehyde • Formic Acid
Glycerophosphates • Medicinal Guaiacols • Hexamethylenetetramine • Paraformaldehyde • Parahydroxybenzoates • Penicillin • Pentaerythritols • Salicylates

Assigning DOFFER'S TASK— Simplified By Table



HIGHLIGHTS: *Time required to doff one frame is basis of table—Elements of time and number of frames reduced to percentages of job—Time studies are the only sound means for gathering data—Rest allowance and variables must be included.*

By F. H. GUNTHER and MARCUS GROSS

DOFFING TASKS in the spinning room can be assigned quickly with the use of a table which readily shows the relation between hours, frame sides, and job percentage. A table similar to the one shown in Fig. 1 is employed by one large spinning room as a means for determining the number of sides in an assignment. The sample is based upon 90% efficiency, a work-load of 32,000 bobbins per 40 hr., and 200 spindles per frame. Similar tables can be worked out for any spinning room, and the savings in time and clerical work resulting from their use are well worth the effort required.

In the sample table, 15-min. intervals for doffing are used in order to save space and to facilitate the work of making the table. Tolerance is held to a variation of approximately 6% by this method.

A doff interval of 4 hr. and 7 min. would be classed as a 4-hr. doff on the table, and in using the table the overseer would read opposite the 4-hr. column to find the correct number of sides in the assignment. Along the middle line marked "No. of sides," he finds the assignment of "32 sides," or 16 frames. The "Percent job (one side)" shows the percentage of a full job assignment which one side represents, in this case 3.12%.

A doff interval of 4 hr. and 8 min. would be classed as 4 hr. and 15 min., and the number of sides would be 34. In all cases, the running time per doff plus actual doffing time equals the doff interval in the table.

On the surface, it may be thought that the 15-min. intervals should be broken down to 1-min. intervals. However, in the sample shown, the 15-min. interval represents a complete doffing task for one frame for the given conditions of yarn number and spindles per frame. In other words, smaller doff intervals would result in fractions of frames, which could not be assigned to a doffer. An overseer who desires to work out a table should first find out what doff interval corresponds to a whole frame in his own spinning room and substitute that number of minutes for the 15 min. used in the table in Fig. 1.

DATA REQUIRED. Many factors enter into assigning doffer tasks. The most important item is the determination of the number of bobbins lifted per 40 hr. This task determination should consider the yarns spun, frame and package sizes, etc.; and for this reason all mills will

(Continued on page 212)

Time Interval	No. of Sides	Percent job (one side)
0:15	2	50.00
0:30	4	25.00
0:45	6	16.66
1:00	8	12.50
1:15	10	10.00
1:30	12	8.33
1:45	14	7.14
2:00	16	6.25
2:15	18	5.55
2:30	20	5.00
2:45	22	4.54
3:00	24	4.17
3:15	26	3.85
3:30	28	3.57
3:45	30	3.33
4:00	32	3.12
4:15	34	2.94
4:30	36	2.78
4:45	38	2.63
5:00	40	2.50
5:15	42	2.38
5:30	44	2.27
5:45	46	2.17
6:00	48	2.09
6:15	50	2.00
6:30	52	1.92
6:45	54	1.85
7:00	56	1.79
7:15	58	1.72
7:30	60	1.66
7:45	62	1.61
8:00	64	1.56

Fig. 1. If the running time per doff is 6 hr., read from 6 in the left-hand column across to the figure in the middle column. The assignment is found to be 48 sides, or 24 frames. The part of a 100% job to which one side is equivalent is 2.09% in right hand column.

Test 480 min. Actual min. working 420

Bobbins lifted 7200

Bobbins lifted per hr. with rest allowance $\frac{7200}{8} = 900$

Percent rest allowance $\frac{480-420}{480} = 12.5$

Fig. 2. To find the bobbins lifted per hour, an 8-hr. time study such as that analyzed above is preferred by the author.

...for SYNTHETIC FIBER BY-PRODUCTS

Here's a service that brings modern merchandising methods to the distribution of your synthetic fiber by-products. Helps you dispose of these materials on a better organized, more stable and profitable basis; operates as your sales research division.

Through intensive research and experimentation, our technical staff is finding many important new end uses, opening valuable new markets for rayon and other synthetic by-products. Our special laboratory control includes careful grading, testing, sorting and processing various synthetic fibers to meet different manufacturers' specific requirements.

Many years of wide and successful experience in adapting and promoting natural fibers equip us to do an efficient job of development work on your surplus synthetics.

Let us know what you have to offer and we will quote you promptly. Or, if you prefer, a Rayco representative will visit your mill for consultation.

The RAILWAY SUPPLY & MFG. CO. and Affiliates

Specialists in Grading, Marketing and Processing Cotton and Synthetic Fibers

General Offices: Cincinnati, Ohio

Plants and Sales Offices:

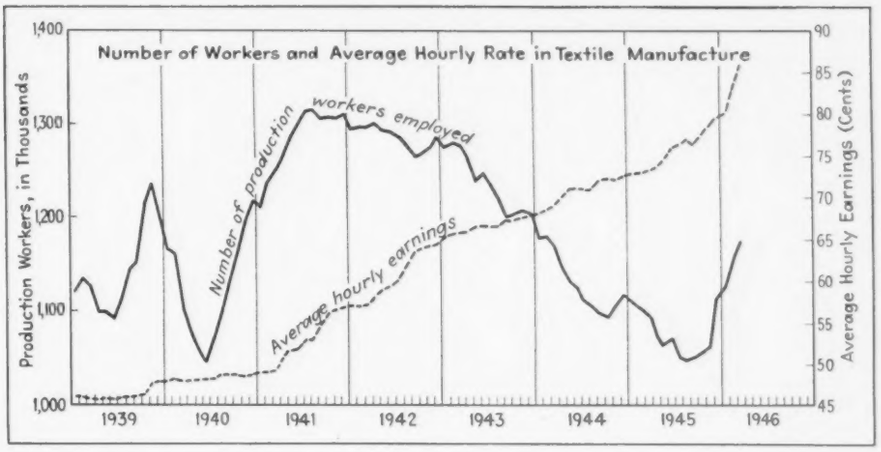
Cincinnati, Ohio
Franklin, Ohio
Atlanta, Ga.
Charlotte, N. C.
Covington, Tenn.
Greensboro, N. C.
New York, N. Y.
Chicago, Ill.
Detroit, Mich.

RAYCO SYNTHETIC FIBERS

TEXTILE WAGES Move Up, While Others are Moving Down

HIGHLIGHTS: *Average weekly textile earnings as of last March was up 11.3% over year before—Similar figure for all industry shows drop of 11.0%—Number of textile workers has been rising since last August and now exceeds 1939 basis.*

By JOSEPH M. GAMBATESE
Washington Bureau, TEXTILE WORLD



ALTHOUGH AVERAGE HOURLY EARNINGS for all manufacturing industries have decreased in the last year, in the textile industry they have shown a steady increase, according to reports by the U. S. Bureau of Labor Statistics giving figures including March, 1946. The more recently granted increases in industries other than textile will be reflected in later reports. The hourly-earnings increase for workers on all types of textile-mill products average 16.7% for the year ending in March, raising their average hourly earnings to 85.8c. In the same 12-month period, weekly earnings rose 11.3%, to $34.68, despite a 4.6% reduction in the work-week to 40.4 hrs. Average hourly earnings for all manufacturing industries, over this same period, dropped 9/10 of 1% to $1.034, and weekly earnings fell 11% to $42.14. Weekly hours were reduced 10.2% to 40.8 hrs.

Since 1939, average textile-worker weekly earnings have more than doubled (from $16.84 to $34.68), and average hourly earnings have almost doubled (from 46 to 85.8c.). Annually, the weekly and hourly earnings were $17.20 and 48.2c. in 1940, $20.30 and 52.6c. in 1941, $24.31 and 60.5c. in 1942, $27.61 and 66.5c. in 1943, and $29.63 and 70.8c. in 1944.

EMPLOYMENT RISING. Employment of production workers in the textile industry, on the other hand, has gone up and down in the last seven years. It was 1,119,000 in January, 1939; reached a low of 1,043,000 in June, 1940, and a high of 1,313,000 in August, 1941. From that date, there was a gradual reduction in the production-worker force. It reached its low point at the end of the war, when only 1,049,000 were working. Since then, however, there has been a steady rise to 1,176,000 last March. This trend is attributed to increased labor supply and higher wage rates.

The industry, as covered in these statistics, includes establishments engaged in performing any of the following operations, regardless of the fiber used: (1) Manufacturing yarn, thread, cordage, and twine; (2) manufacturing woven cloth, carpets and rugs, braids, laces, knit cloth, knit garments, and other products from finished or unfinished yarn; (3) dyeing and finishing fibers, yarn, and cloth; and (4) coating, waterproofing, or otherwise treating fabrics. Rubberizing of fabrics is not included.

Since V-J Day last August, average hourly earnings of this group have risen from 77 to 85.8c., and weekly eranings from $29.60 to $34.68. Since the beginning of the war, weekly hours worked have ranged from slightly under 40 to a little over 42.

Breaking down the industry, percentage increases in average hourly earnings in the year ending last March varied from 20.6% in cotton manufacture (except small wares) to 6% in cotton small wares. The average, however, was 16.7%.

The accompanying table presents a breakdown of the industry showing the average hourly earnings in 1939, in March 1945, and in each of the eight months, ending March 1946.

Average Hourly Earnings (cents) for Textile Mill Group

	March 1946	Feb. 1946	Jan. 1946	Dec. 1945	Nov. 1945	Oct. 1945	Sept. 1945	Aug. 1945	March 1945	1939
TEXTILE-MILL PRODUCTS AND OTHER FIBER MANUFACTURES (entire group)	85.8	83.3	80.3	79.5	78.6	77.3	76.3	77.0	73.5	46.0
Cotton manufactures, except small wares	78.8	75.3	72.4	72.0	71.3	69.8	69.8	70.8	65.4	38.9
Cotton small wares	86.7	84.6	84.6	84.2	82.6	80.4	79.6	82.2	81.4	47.4
Silk and rayon goods	83.8	81.2	79.0	78.8	77.7	76.2	76.1	76.6	71.3	42.9
Woolen and worsted manufactures, except dyeing and finishing	99.9	98.8	92.2	90.0	88.4	88.2	86.6	87.7	86.2	52.8
Hosiery	87.1	86.2	84.6	83.8	83.1	83.0	81.7	79.8	77.8	53.6
Knitted cloth	88.0	86.2	84.3	81.4	82.2	80.8	80.7	77.8	86.6	46.8
Knitted outerwear and knitted gloves	85.6	83.8	82.2	81.6	81.1	81.3	79.3	78.0	79.5	46.1
Knitted underwear	75.5	73.3	72.5	71.8	71.1	70.1	70.2	70.8	67.7	41.0
Dyeing and finishing textiles, including woolen and worsted	93.1	90.9	88.2	88.7	86.6	85.2	83.9	85.5	78.4	53.5
Carpets and rugs, wool	99.7	98.5	98.3	97.5	98.0	91.1	91.2	91.8	94.0	64.4
Hats, fur-felt	121.0	118.1	118.5	118.4	117.4	115.4	109.7	111.0	110.9	70.7
Jute goods, except felts	84.1	83.1	81.6	80.8	81.2	79.1	79.2	78.7	78.8	*71.7
Cordage and twine	81.3	78.5	78.2	77.8	77.2	76.7	76.8	76.6	75.0	*67.0

*1943

The Quality of Boger and Crawford knitting yarn is guaranteed —the highest tribute we can pay it. Signed . . . . . .

Frederick Boger

BOGER and CRAWFORD PHILADELPHIA, PA.

Quality Cotton and Mercerized Yarn Exclusively

UTICA, N. Y. • BOGER CITY, N. C. • BOSTON, MASS. • CHICAGO, ILL.

COTTON EXPORT PLAN
Aims at Rehabilitation and Trade

HIGHLIGHTS: *Distribution of raw cotton to Japan and Germany may improve U. S. position on international market—Goods to be sold in foreign trade at same price as though made in U. S.—Several agencies involved, including Departments of War and Agriculture and the USCC, a subsidiary of RFC—Shipments are beginning.*

By GLADYS T. MONTGOMERY, *Washington Office, TEXTILE WORLD*

GERMAN COTTON IMPORTS 1921 TO 1945

(Figures in Thousands of 478-lb. Net Weight Bales)

Year	Argentina	Brazil	British India	Egypt	Peru	United States	Other countries	Total
1921	4	4	210	56	1	1,167	13	1,454
1922	4	8	152	57	3	931	9	1,163
1923	3	2	123	50	2	703	17	900
1924	4	....	154	85	2	1,010	20	1,276
1925	9	3	205	86	3	1,405	21	1,732
1926	9	2	121	60	2	1,288	17	1,497
1927	11	5	157	106	13	1,946	27	2,266
1928	10	3	209	84	12	1,414	28	1,760
1929	16	3	257	108	10	1,411	34	1,839
1930	15	17	251	112	28	1,271	34	1,728
1931	10	11	166	135	47	1,092	40	1,501
1932	22	1	95	152	39	1,365	55	1,728
1933	24	....	165	180	45	1,444	63	1,921
1934	26	38	160	204	52	875	105	1,402
1935	66	380	129	181	116	345	213	1,430
1936	44	159	136	134	86	326	205	1,092
1937	27	288	117	182	85	302	127	1,129
1938	75	374	102	208	66	208	119	1,153
1939*	Iran	Greece	France	Turkey	Italy	Russia		
1940†	37	....	103	....	....	294	121	555
1941	45	15	27	....	....	263	12	362
1942	12	8	20	5	....	29	....	74
1943	....	1	2	12	4	21	4	44
1944	....	1	....	18	7	3	....	29

* Figures for 1939 were available for only one quarter, so were omitted. Note new sources from 1940.
† Figures for 1940 to 1944 inclusive are from a different series given in metric tons which were converted to equivalent 478-lb. bales by multiplying by 4.612. Much of the cotton listed for these years was probably confiscated after German occupation.

GERMAN COTTON SPINDLES AND LOOMS

	Prewar and Present			
	Spindles		Looms	
	Prewar	Now	Prewar	Now
U. S. A. Zone	1,609,000	1,200,000	38,000	32,000
British Zone	2,952,000	2,380,000	49,000	40,000
French Zone	X	1,200,000	X	45,750
Russian Zone	X	1,752,000	30,500	X
Total Spindles Intact		6,532,000		

X—Unknown

THE GOVERNMENT'S immediate objective in the setting up of programs for cotton exports for ex-enemy countries and liberated areas is rehabilitation; and there is the long-distance objective which looks to the restoration or even to the increase of the prewar markets for United States raw cotton exports. Every effort is being made by government agencies to dove-tail current rehabilitation plans into this ultimate objective—a strong position for American cotton in the international market as a basic part of the foreign trade policy of the United States.

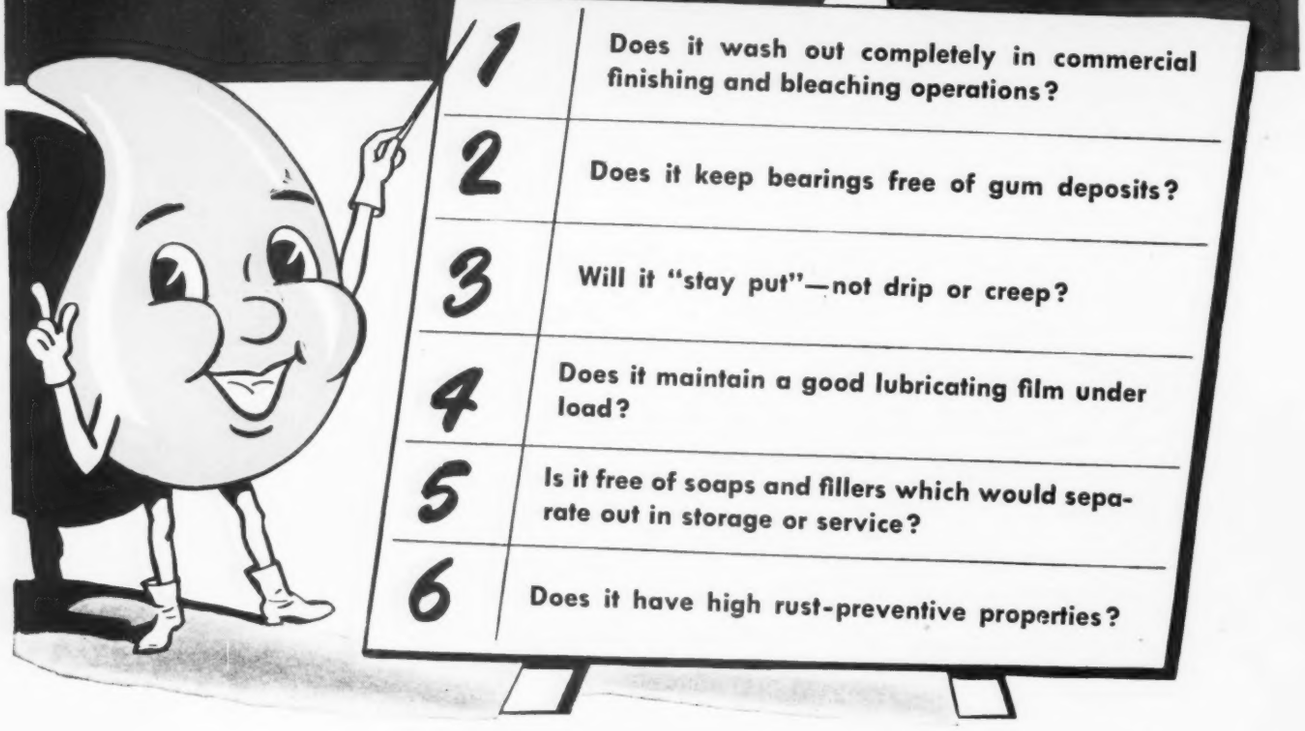
This policy is predicated on the generally conceded premise that the American cotton economy cannot exist, much less thrive, without foreign markets. Notable among those officials who have sought to keep this concept to the forefront in the consideration of postwar adjustments is Clinton P. Anderson, Secretary of Agriculture.

Other cotton exporting countries, most of which have a lower standard and are willing to sell at lower price, are fully aware of the predicament of American cotton and its need for foreign markets. And there is already underway, it is pointed out, a strong and determined effort by those countries to get a part of the United States prewar market. Hence, the strong feeling in Washington that it is none too early to make a start in the reclaiming of our position.

In normal prewar years, more than half of the cotton grown in the United States, was shipped abroad. In 1929, 54.8% of the total production was exported; in 1933, the figure was 65.6%; in 1938, it dropped to 30.5% and in 1940, it climbed to 52.6%. At the end of the current marketing year, Aug. 1, 1946, the carry-over of raw cotton is expected to be between 7 and 8 million bales. For a two or three months period at the beginning of the new year, there is need for about 5 million bales as a carry-over to take care of our own mill operations until the next crop becomes

(*Continued on page 197*)

6 IMPORTANT QUESTIONS TO ASK ABOUT YOUR SADDLE AND TOP ROLL OIL


1 Does it wash out completely in commercial finishing and bleaching operations?
2 Does it keep bearings free of gum deposits?
3 Will it "stay put"—not drip or creep?
4 Does it maintain a good lubricating film under load?
5 Is it free of soaps and fillers which would separate out in storage or service?
6 Does it have high rust-preventive properties?

THERE'S A SHELL TEXTILIS OIL FOR TOP ROLLS AND SADDLES

IF YOU CAN ANSWER "YES" to all six questions, you have an excellent saddle and top-roll oil, and the chances are it is a Shell Textilis Oil!

If the oil you now use doesn't measure up, it will certainly pay you to investigate Shell Textilis Oils. Compounded from solvent-extracted mineral oils and special fatty materials, these oils offer amazing washability. Moreover, their cohesive properties are secured by extra care in refining—a method which eliminates the need for soaps or fillers to prevent dripping or creeping.

* * *

The Shell Lubrication Engineer will gladly give you specific advice on the lubrication of any type twisting frame or spinning frame. For informative literature about textile machine lubrication write Shell Oil Company, Incorporated, 50 West 50th St., N. Y. 20, New York; or 100 Bush St., San Francisco 6, Calif.

SHELL TEXTILE LUBRICANTS

SHELL

TEXTILE Equipment NEWS

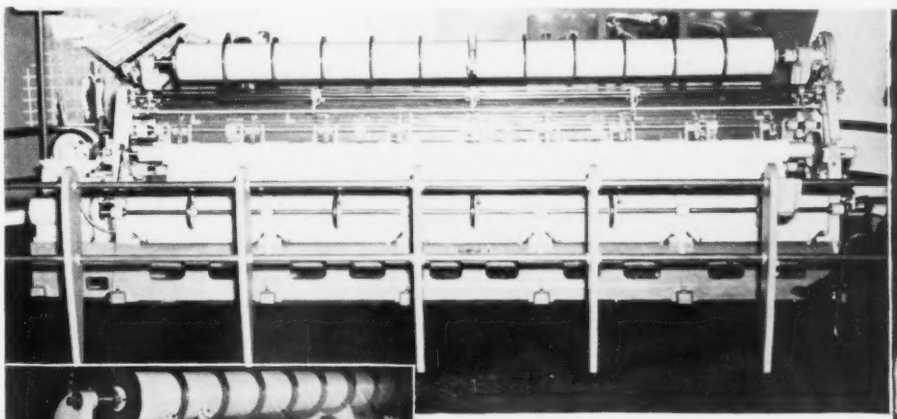
First Showing of New Aveco Tricot Machine

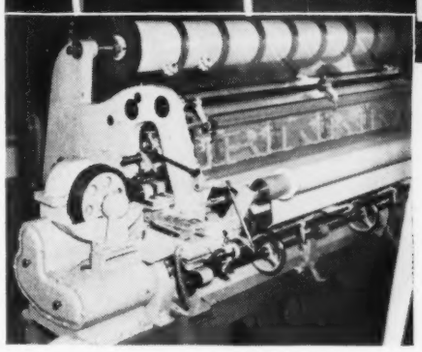
The fastest knitting machine in the world for its size is being built for Aveco, Inc., Amsterdam, N. Y. by Warner & Swasey Co. Designed and engineered by Aveco, the 168-in. machine operates at 509 courses per min.

Rugged construction, required to withstand such high speed, is a characteristic of the machine.

New features enabling the increased speed are withheld by the manufacturers at this time. However, in general the machine conforms to conventional design in many respects as is illustrated in Figs. 1, 2, and 3.

Of the initial contract calling for manufacture of 50 machines, only six have thus far been produced.





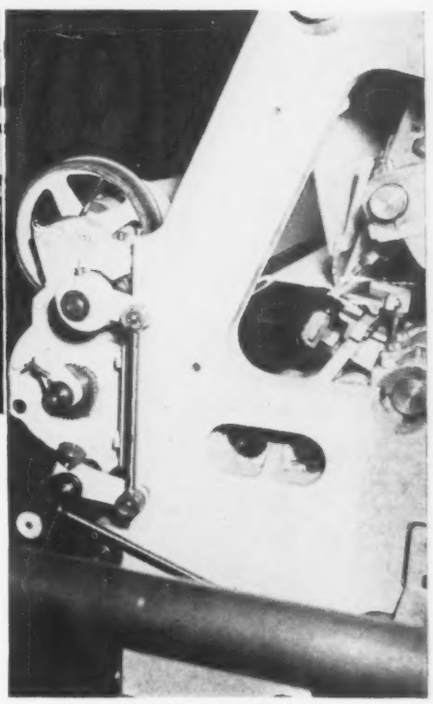


Fig. 1. (left) Head-end of new Aveco machine shows the oil reservoir for pattern cams and facilities for removing the cloth roll.

Fig. 2. (above). New tricot machine is ruggedly constructed to withstand high speeds.

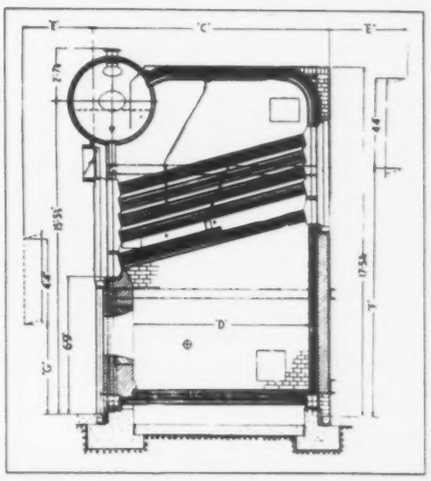
Fig. 3. (right). Aveco machine uses conventional arrangement of presser bar, guide bars, bearded needles, and cloth take-up motion, as evident in photograph.

Water-Tube Boilers Made in Standard Sizes

A line of 12 standard water-tube boilers ranging in steam generating capacity from 6,000 to 17,000 lb. of steam per hr. is announced by Springfield Boiler Co., 1977 E. Capitol Ave., Springfield, Ill. Designated as the Springfield type M series, the new boilers feature a water-cooled furnace design said to be particularly successful where it is necessary to maintain uniformly high efficiency over a wide range of load conditions encountered.

Type M boilers are made with two standard tube lengths, 10 ft. and 12 ft. expanded into sinuous electric steel sectional headers. Furnace width varies from 3 ft. 9 in. to 9 ft., depending on whether 4, 5, 6, 7, 8, 9, or 10 header sections are used. All boilers in the line have 48-in. dia. welded, X-rayed, and stress-relieved steam drums built to various pressure standards ranging from 160 to 320 lb. The overall setting height is 17 ft. 5¼ in. for all units.

Designed for automatic firing, present combustion chamber dimensions are said to provide for highest efficiency possible with oil or gas burners. Attractive features claimed for the design are simplicity of maintenance, minimum



Cross-section of standard water-tube boiler. (Springfield.) →

number of parts, and ability to operate considerably above rated capacity. Heat applied to steam delivery tubes and steam delivery above water level are features intended to insure very dry steam and freedom from priming.

Weaving-Knitting Loom for Wide Fabric Range

The combination weaving and knitting machine called Kayloom, has been reintroduced by Robert Reiner, Inc., Weehawken, N. J. The machine employs warp and filling yarns as in weaving, but instead of interlacing the two systems of yarns it ties a knot around their intersections, using a knitting stitch. Depending upon the selected inter-relationship of warp and filling yarns, the fabric produced can be made to resemble either woven or knit goods, it is said, but the machine is designed to produce fabrics different in appearance and character from either woven or knit goods. One advantage claimed is that stretch can be limited to that existing in the yarn only, if it is desired.

Pattern control is said to permit wide variations in design, making possible warp or filling stripes, plaids, and checks on the square or diagonal. Fabrics can be made open and porous and yet remain firm and free from slippage, it is stated.

The standard 128-in. machine will form a single width of 120 in., 2 widths of 60 in., or 3 widths of 40 in., all with fast selvages.

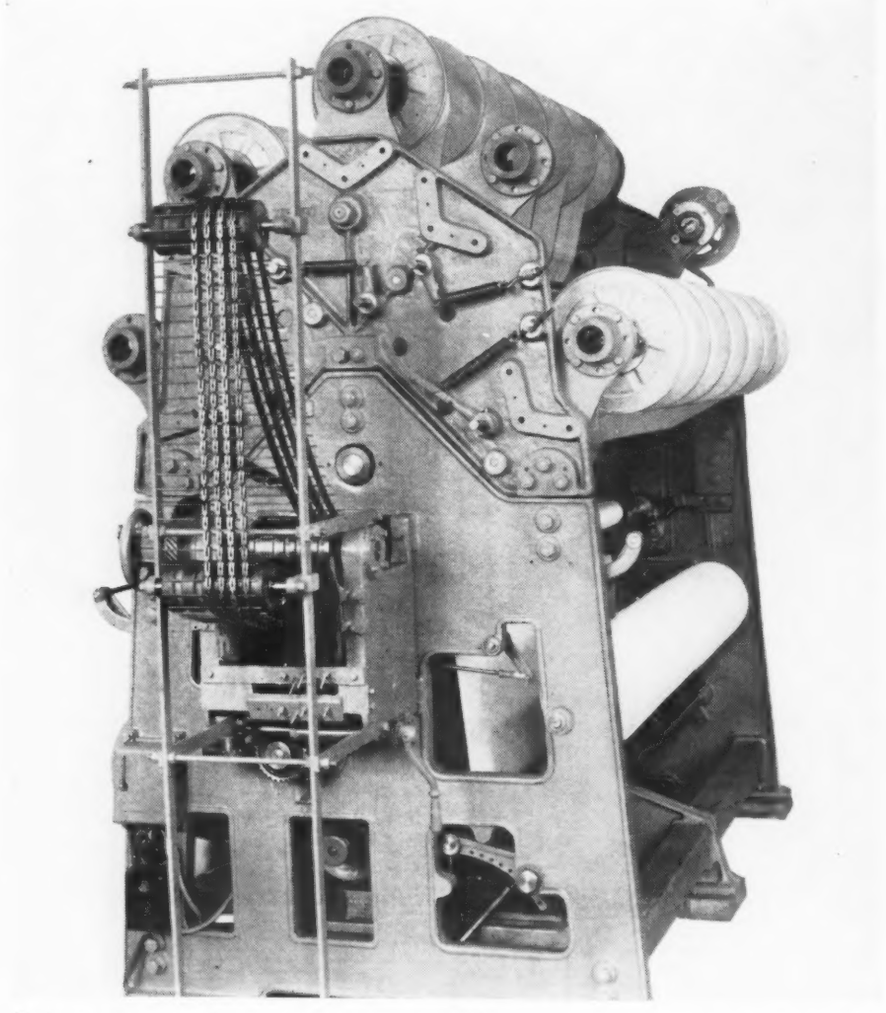
An advantage of the new machine over the previous model is the substitution of counter cams for box cams.

Warp tension is controlled by mechanical brakes, and is so low that end breakage is practically eliminated, it is said. There are facilities for mounting 5 warp beams.

Filling running from large cones, and the elimination of shuttles, are said to lower cost and increase production.

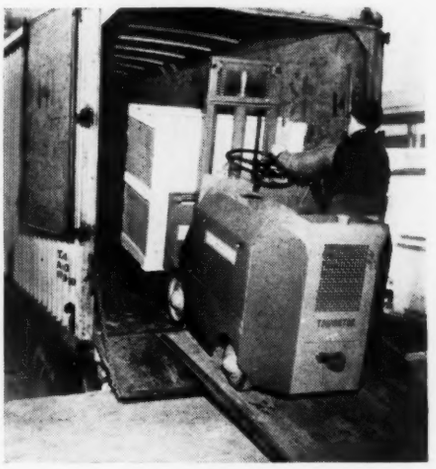
Warp and filling stop motions can be applied if desired.

Speed is variable, and dependent upon the number of bars employed.



Kayloom produces wide range of patterns, resembling woven or knit goods, or different from either. (Reiner)

New Towmotor Features Side-Mounted Motor



Lift truck with side-mounted motor allows its use in previously inaccessible areas (Towmotor.)

A compact lift truck with a side-mounted motor engineered to cut wheelbase length to 35 in., is announced by Towmotor Corp., Cleveland, Ohio. Placement of the motor on the side is said to reduce overall length without sacrifice of strength. The new model is designated LT-35. Lifting and tilting mechanisms are hydraulic, the same type used for years in other Towmotor models. The model LT-35 weighs only 2800 lb. but it is reported that it will lift, carry and stack a 1500 or a 2000 lb. load in areas previously inaccessible to lift truck operation.

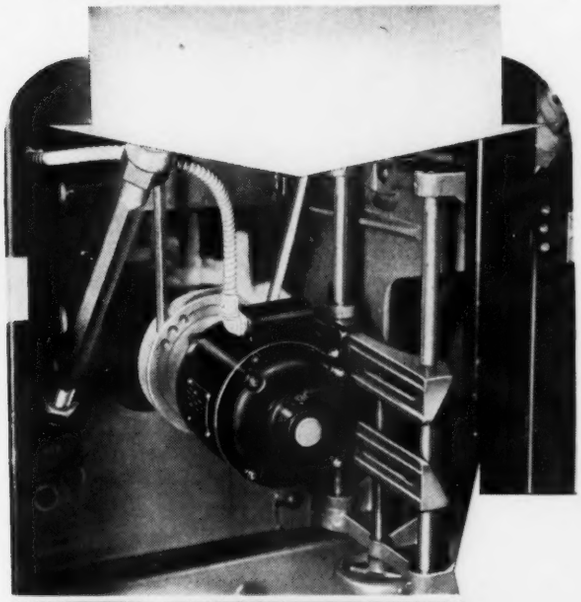
Design of the new model places the operator at the side of the power unit and makes it easy for him to get on and off. The seat has a back rest and is protected front and rear, while entrance to the driver's compartment is wide with the step only 9½ in. high. Two wheels on the steering axle are said to achieve a short turning radius without sacrifice of safety or stability.

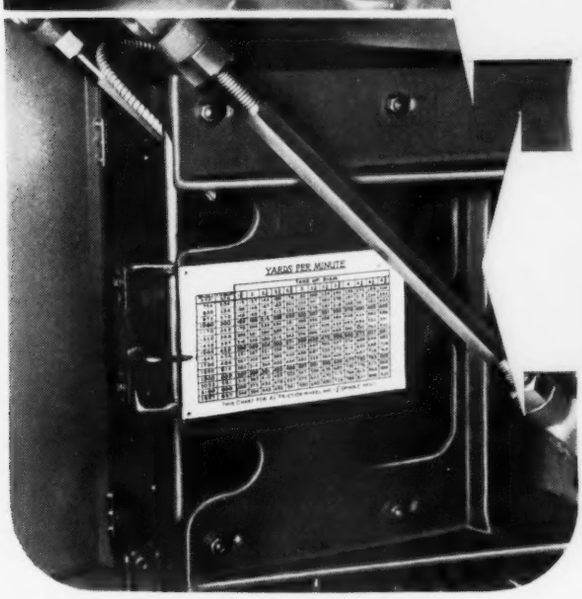
Engine, transmission, and axle units are reported to be easy to get at for maintenance inspections and adjustments, while quick removal of a side plate permits all electrical and carburetor adjustments. Clutch replacement can be accomplished without moving either the engine or the transmission, it is stated.

Rubber Thread Tester Helps Knitters and Braiders

A new rubber thread tester announced by Lawson Products, Inc., Pawtucket, R. I., is designed to prove, in advance, whether a rubber thread will run through a knitting or braiding ma-

HERE is a real step forward in REDRAWING





NOW YOU CAN CHANGE RATE OF PRODUCTION . . . IN A MATTER OF SECONDS . . . FROM 150 TO 350 YARDS PER MINUTE

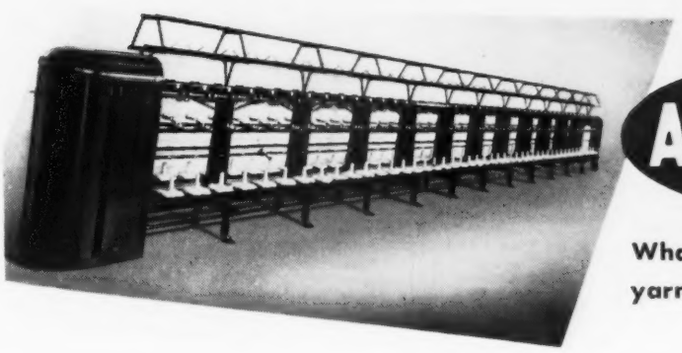
We are talking about the latest Atwood Redraw, the Model 200, *with the variable-speed main drive,* for redrawing from cakes, cones, tubes, pirns, bobbins, or skeins.

With this drive, change gears are a thing of the past. Simply by turning this small handwheel the right yarn speed—anything between 150 and 350 yards a minute—can be obtained in a few seconds.

Furthermore, you don't have to take time out for frequent and bothersome calculations. This quick reading, yarn-speed-per-minute chart is mounted on the machine near the variable-speed main drive. Everything you need to know about production is automatically figured out for you as you adjust the speed. Mistakes that are almost impossible to avoid when making rapid on-the-spot computations are eliminated completely.

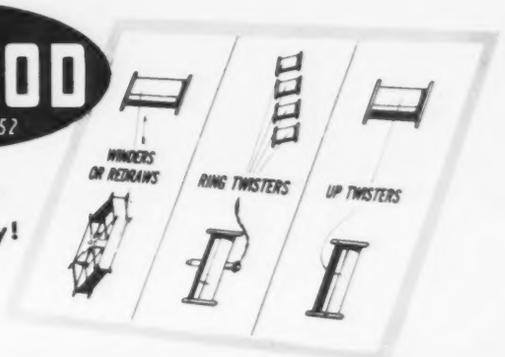
This is only one example of the design advances constantly being incorporated in Atwood machines. Write for full details of the Atwood Model 200 Redraw, and Atwood Ring Twisters and Up-Twisters. Let us show you *what's new in yarn machinery.* AD–5

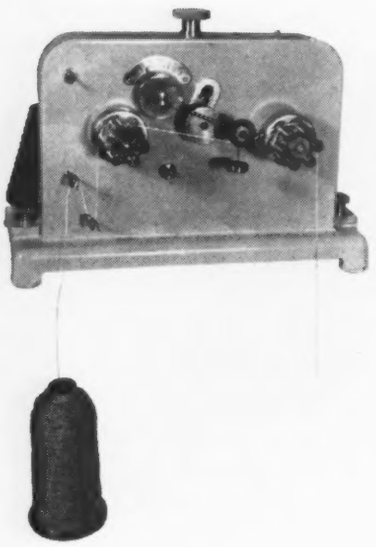
ATWOOD DIVISION
FARREL-BIRMINGHAM COMPANY, INC.
STONINGTON, CONN., U.S.A.



ATWOOD
SINCE 1852

What's new in yarn machinery!





Rubber yarn is stretched any predetermined amount from zero to 950% by changing gears in back. (Lawson.)

chine at a desired stretch without breaking, and reportedly has shown that rubber thread which stands 950% stretch in a static test, may not be safely run through a machine at 450% stretch.

Two revolving multiple spindles revolve at a given ratio of speed to give the desired stretch. By changing gears, any required stretch from zero to 950% may be obtained. The rubber thread is wound several times around the left hand spindle and then around the right hand spindle and the machine is set in motion. The tension and uniformity of the thread is read from the scale. In the event of a break the tester stops instantly.

The tester can be provided with a recording device providing a permanent record for a test.

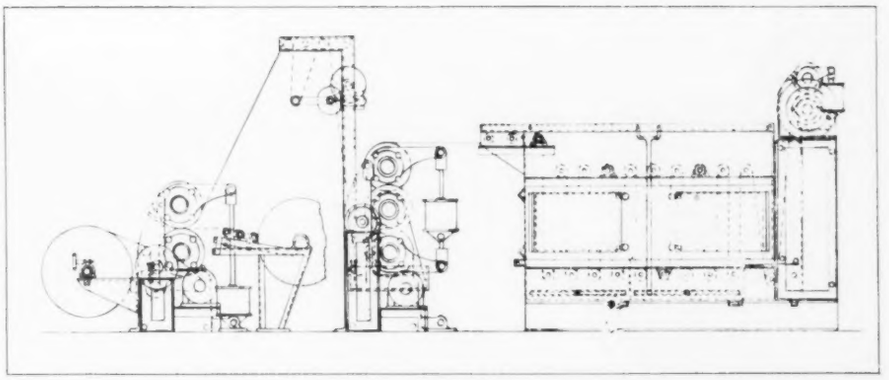
Continuous Process Used In Steam Dye Range

A new continuous steam dye range has been announced by Cook Sales & Engineering Co., 15 Albermarle Rd., Waltham, Mass. Constructed in three parts, the machine is available in component parts, or as a unit.

The first unit is a 2-roll pneumatic set padder with rubber-covered rolls and stainless-steel color pan with foam guard. A slip belt batcher is optional but allows the use of the padder as an independent machine if required. The machine is arranged to take cloth from trucks or batch.

Following is a 3-roll pneumatic set caustic padder arranged for two immersions. This padder has a radial type compensator attached for synchronizing the speed of the two padders.

The third unit is a stainless steel steam ager with rubber-covered pneumatic set squeeze rolls at the delivery end. This box is equipped with stainless-steel rolls and shafts that revolve in self-aligning ball bearings mounted independently from the box. The top rolls are driven with roller chain and sprockets from the squeeze rolls. The rolls in the booster section revolve in oilless bearings and do not have stuffing boxes. The doors are made of sufficient size to allow for easy access for cleaning. The drive is from the 3-roll padder through a Reeves variable-speed or direct-motor drive with compensation.



Continuous steam dye range features stainless-steel parts and oilless breaings. (Cook).

Rotary File and Die Grinder Weighs But 16 Ounces

An extremely small and lightweight pneumatic file and die grinder is announced by Ideal Industries, Inc., 1612 Park Avenue, Sycamore, Ill. Although it is only 6½ in. long and 1½ in. in dia., and weighs but 16 oz., it is rated at ¼ hp., at 19,000 rpm. Maximum speed is 25,000 rpm.

The motor is vane type, the same as is used in large-sized pneumatic tools, and is said to maintain its speed under heavy loads. The harder it is worked, the cooler it becomes, it is stated. Dust and chips that may be formed are blown away by the exhaust of air from ports at the chuck end of grinder, leaving work clear for observation.

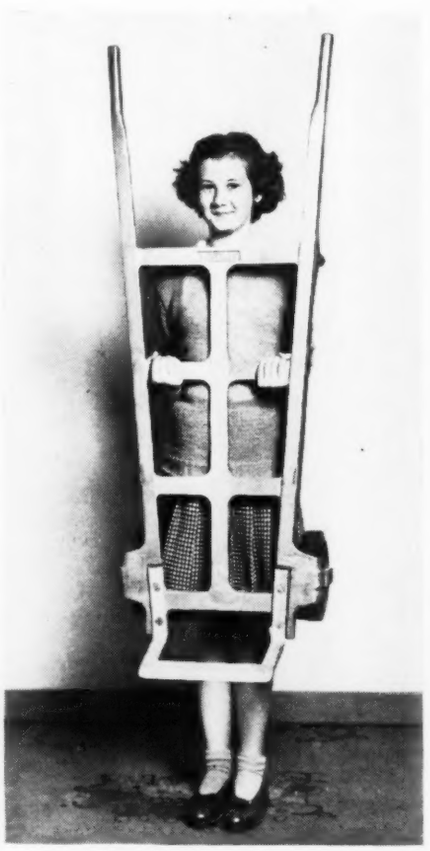
The construction is rugged, with large precision type bearings used throughout. The chuck is of the double grip type so that the flexible sleeve securely holds both oversize and undersize shanks. The standard chuck is made for tools having ¼ in. shank. Flexible sleeve may be obtained for ⅛ in. or 3/16 in. shank.

The grinder is available with either lever or button type control, and handles wheels up to 1½ in. maximum dia.

Light-Weight Hand Truck Weighs Only 26.6 Pounds

A general-purpose, regular-duty hand truck weighing only 26.6 lb. and made of cast magnesium alloy is announced by Magnelux Mfg. Co., 321 E. Fourth St., Los Angeles, and designated Zephyr I. All stress points are said to be doubly reinforced, no points or edges are allowed to cause the usual annoying snags. It is balanced so that when unloaded, it automatically falls forward.

Wheels are cast magnesium, equipped with ball bearings, and Zerk lubricated. The rubber tread is molded-on. The nose is made of rust-proof steel.



New cast magnesium alloy handtruck is so light a 12-yr. old girl can lift it. (Magnelux.)

SONOCO'S DYTEX tube is meeting all comers for package dyeing and bleaching.

Many years of laboratory research have developed the laminated fibre construction impregnated for strength and toughness which is also resistant to dyeing and bleaching formulas.

The DYTEX tube is priced for economical one-time use—made in all standards to fit package dyeing machinery—special sizes available.

sonoco
SERVES THE WORLD
PAPER CARRIERS

SONOCO PRODUCTS COMPANY

BRANTFORD ONT. HARTSVILLE S. C. MYSTIC CONN.

DEPENDABLE SOURCE OF SUPPLY

Dyes & Chemicals — PRODUCTS & PROCESSES

Low-Concentration Silicone Antifoam Agent

DC ANTIFOAM A; Dow Corning Corp., Midland, Mich.

A new silicone product said to be an effective antifoam agent in very low concentrations, has been announced by Dow Corning Corp. Only 1 part in 10,000 is required against strong foamers, while 1 part in 1,000,000 is sufficient for weak foamers, it is reported.

The manufacturer expects DC Antifoam A to be effective in eliminating foaming problems encountered with many soaps and wetting agents, and reports that concentrations of 70 to 700 parts to 1,000,000 have proved to be adequate.

DC Antifoam A is a viscous compound which is translucent, colorless, and tasteless. It is chemically inert, non volatile, and has a slight but not unpleasant odor. It is insoluble in alcohol or water, but is dispersable in such solvents as benzene, carbon tetrachloride, toluene, etc. Emulsions can be prepared if necessary.

Permanent Resin Finish

KANDAR; United States Rubber Co., New York

A textile treating resin which imparts a crispness to cotton and rayon fabrics is said to eliminate the necessity for starch in such garments as women's house dresses, children's play clothes and shirts is announced by United States Rubber Co., New York.

Now commercially available to textile finishers, the new treatment called Kandar is applied during processing, and garments will be bought with the resin already applied. Repeated launderings and dry cleanings will not wash the finish out of the fabric, it is stated. Kandar need not be heated to bind it to the fabric. Depending on the quantity applied, the effect may be varied from bodying of the cloth to the production of crisp or linenlike finishes.

Colors of fabrics are unaffected by Kandar, and color stability is said to be in some cases improved. It is reported that increases in the tensile strength of Kandarized fabric are moderate, linting of certain fabrics has been greatly reduced, and resistance to wear increased several fold at higher concentrations of finish.

Mill Maintenance — TO KEEP 'EM RUNNING

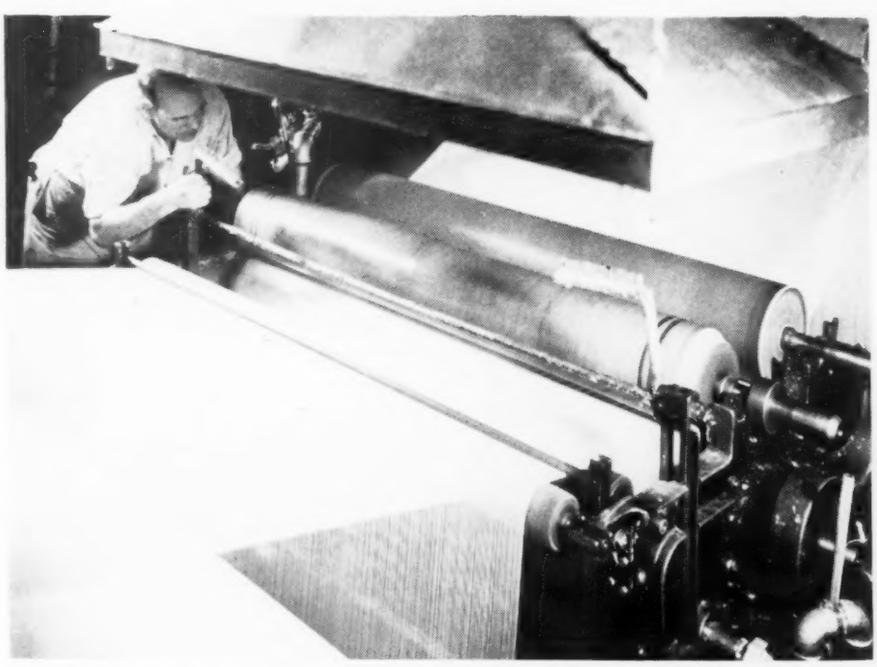
Rubber Covered Squeeze Rolls Prove Economical

One large mill in South Carolina has materially reduced the maintenance required by the squeeze rolls in its slasher size box by covering the rolls with synthetic-rubber covers. Until this installation was made, the rolls had required recovering about every two weeks, which, of course, interferred with slasher production.

The first rubber-covered roll installed has been in operation approximately 7,100 hr. It has been buffed three times. This buffing was necessary to smooth out some blister-like spots which appeared on the roll surface. The performance in general has been satisfactory, and the cost of using this type of covering has been estimated at one-third the cost of using wool-blanket covers.

The experience of this mill with the rubber-covered rolls indicates that:

1. Each installation must be "tailor made" to suit conditions under which the particular slasher is operating.
2. Sizing analyses indicate that performance of these rolls is comparable to that of blanket-covered rolls.
3. Shedding of size at the slasher and loom is only slightly increased.
4. The rolls run well in combination installations with blanket-covered rolls.
5. Cost of operation is considerably lower than when blanket-covered rolls are used.



Synthetic-rubber covers for squeeze rolls have considerably lessened slasher down-time for roll maintenance in a mill in South Carolina.

"5% MORE PRODUCTION in Carding"

"50% FEWER ENDS DOWN in Spinning"

"50% LESS RESIDUAL OIL after Scouring"

Fybrol 1115

"The finest wool and worsted fibre lubricant"

FYBROL 1115—introduced only a year ago—is now standard in mill after mill. Such a lubricant was needed—self-scouring, water-soluble, non-gumming, uniformly penetrating—Fybrol 1115 meets all requirements. All along the line, FYBROL 1115's better coverage improves mill efficiency. For example: At least 50% less residual oil after scouring—in most cases soap is entirely eliminated. Increased card production—at least 5%. Improved spinning—50% fewer ends down. Results: Better fabric . . . better handle . . . better dyeing and finishing.

FYBROL 1115 is easier to use and more economical than conventional wool and worsted oils . . . practically foolproof . . . proved by experience in mill after mill, on all types of blends.

Try, then standardize on FYBROL 1115 . . . unexcelled for its wetting and detergent properties. Send for latest performance data and trial order.

•

NOTE—FYBROL 1115 performance results quoted above are from actual mill experience and in individual cases may vary to a greater or lesser degree depending on conditions.

•

Textile Chemicals Division,
L. SONNEBORN SONS, INC.,
Dept. W6, 88 Lexington Ave., New York 16, N. Y.

We are interested in FYBROL 1115 for processing Wool . . . Worsted . . . Please send us latest mill performance data on FYBROL 1115 . . . Ship us . . . 54-gal. drum(s) of FYBROL 1115 at current price.

Name ..... Title .....

Company .....

Address .....

City ..... P.O. Zone ..... State .....

TEXTILE CHEMICALS DIVISION

L. SONNEBORN SONS, INC.

88 LEXINGTON AVENUE · NEW YORK 16, N. Y.

PLANT AND LABORATORIES: NUTLEY, N. J. REFINERIES: PETROLIA AND FRANKLIN, PA.

Wool and Worsted Oils · Petroleum Sulfonate Bases · Detergents and Dyeing Oils · Penetrants · Delustering Specialties
Warp Dressings · Finishing Sizes and Softeners · Water Repellents · Sulfonated Oils · Wetting and Rewetting Agents

Kinks AND SHORT-CUTS

A $25 SAVINGS BOND FOR YOUR IDEA

A $25 Savings Bond will be awarded each month for the most useful "kink" published in this department. This contest is open to all readers of TEXTILE WORLD, and there is no limit to the number of entries any one person may make.

Contributions must be received not later than the last day of the month to be eligible for the award for the second succeeding month. Items may pertain to production methods, mill engineering, safety, cutting costs, improving quality, speeding up production, in brief any little device, stunt, kink, or shot-cut which you have tried out in your own mill and which you believe will be helpful to other mill men. Items should contain sufficient detail to permit other mill men to utilize the ideas in their own operations. Previously published material is not eligible, for the award. Judges of the contest are the editors of TEXTILE WORLD.

TEXTILE WORLD shall have the right to publish any items submitted. Items which are accepted will be paid for at our regular rate for this type of matter with one extra payment for appropriate sketches or photographs. The sketch you submit need not be a finished drawing.

In writing to this department, give your real name and address as evidence of good faith and to permit payment for items accepted. Please advise whether your name may be used with the kink.

Contributions should be addressed to: Technical Editor, TEXTILE WORLD, 330 West 42nd St., New York 18, N. Y.

★ **SAVINGS BOND PRIZE FOR JUNE**

(April Contest)

Starting Cloth Roll Requires An Adhesive

Processing low-count, viscose-rayon taffeta on our 90-ft. tenter dye pad combination requires that constant speed (90 yd. per min.) be maintained. Since we use a cutter, without stopping the range, to cut the cloth when a full roll must be removed and a new one started, we have a problem in starting the cloth around the empty shell roll.

We tried wetting the shell roll so that the cloth would stick to it sufficiently to start the cloth around it. This practice resulted in water stains and distorted and creased cloth for about the first 20 yd. of the roll.

We next tried "flicking" a piece of paper at the cloth the instant the blade cut the cloth. This method eliminated the water stains, but it brought some complications because it required an extra man and resulted in increased cloth distortion. The filling of the cloth was bowed and skewed beyond remedy.

The third method we tried consisted of placing three strips of electrician's friction tape around the shell roll, as shown in the photograph. Since both sides of this tape are covered with an adhesive substance, the tape caught the cloth immediately and held it in place until the roll was started. Although no distortion of the cloth resulted, the cloth had three black marks on it for a yard or two next to the shell roll.

At last we substituted "Scotch" double-coated tape for the friction tape. This "Scotch" tape is clean, grips as readily as the electrician's tape, and leaves no marks or stains on the cloth. The cloth unrolls readily, leaving the tape on the shell roll. The same piece of tape can be used several times. *(K-475)*
Charlie Waters, Hopewell, Va.

"Scotch" double-coated tape, substituted for the black friction tape shown on the shell roll, will start the cloth around the roll without leaving a mark on it.

(Kinks and Short-Cuts Continued on page 154)

UNIFORMITY COUNTS!

Between the time cotton comes into Dixie's spinning plant and the time Dixie Durene comes to you, every cotton fibre has been pulled, lapped and twisted 1,105,920 times!

This is the process that gives Dixie Durene its smooth, lustrous finish, its strength and even texture . . . the process that produces smooth-running yarn. Of uniformly high *quality* Dixie Durene produces *quality* merchandise — products that *sell.*

Retail sales people like to sell garments made of Dixie Durene. They call it "effortless selling." Apparel with real eye-appeal needs no high-pressure salesmanship. It sells itself!

Keep merchandise *on the move* . . . knit your products of dependable, high quality Dixie Durene.

Dixie Durene
A PRODUCT OF CONTROLLED MANUFACTURE

Dixie MERCERIZING COMPANY, CHATTANOOGA 1, TENNESSEE

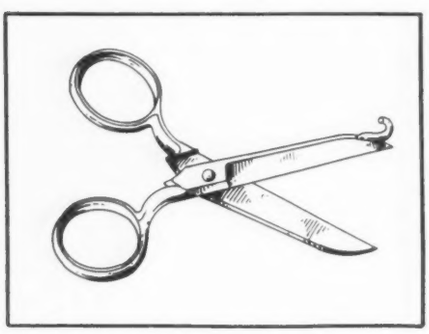
KINKS & SHORT-CUTS

(Continued from page 152)

Hook on Scissors Keeps Yarn Cleaner

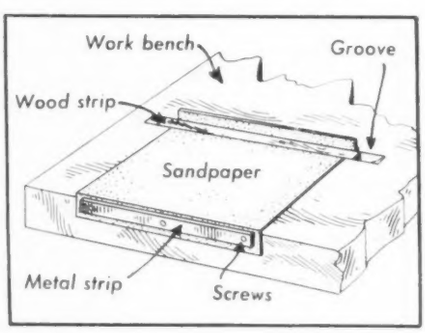
Much damage can occur to rayon, nylon, and other synthetic yarns by perspiration from an operator's hands. To prevent damage of this nature, particularly in winding and redrawing, we have trained our operators to use scissors with a hook on the end for letting the end down to its normal running position after tying a knot.

The scissors, of course, should be chromium-plated to prevent rust; and if special scissors with hooks cannot be bought, a hook can be braised on a regular pair. (*R*-482)

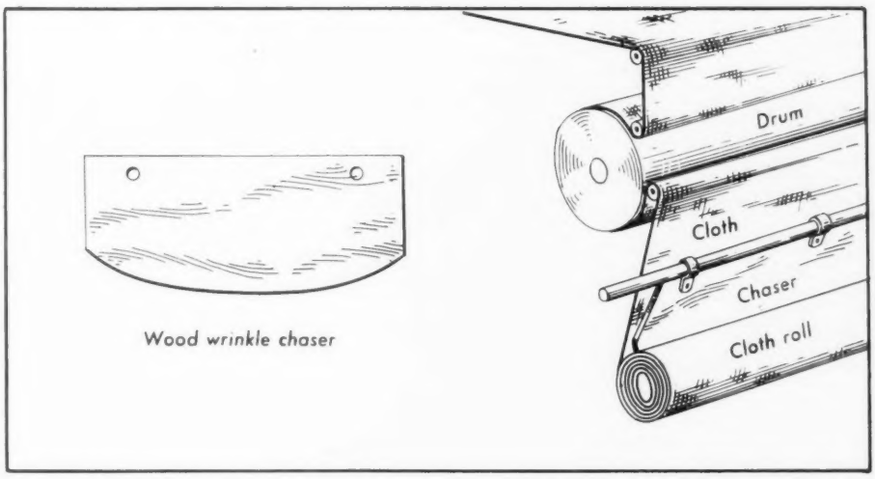


Perspiration from the hand of the operator can be kept off the yarn by using the hook on the end of the scissors.

Holder For Sandpaper Aids Sanding of Shuttles



Sandpaper attached to the work bench, as shown in the illustration, aids loomfixers in sanding the backs and bottoms of shuttles. A length of flat metal can be used for holding the sandpaper along the bench edge, and a groove cut in the bench top allows the paper to be drawn tight and held in place with a wooden strip. Press the shuttle down firmly and move backward and forward to remove "washboard" backs or "rocker" bottoms. Smooth off the edges with emery cloth. (K-485)



The wrinkle chaser should be approximately of the same length as the cloth take-up roll.

Device Made of Wood Eliminates Cloth Wrinkles

Wrinkling of the cloth on the cloth take-up roll of a loom can be prevented by placing a piece of ¼-in. pine board or plywood directly above the take-up roll to act as a "wrinkle chaser."

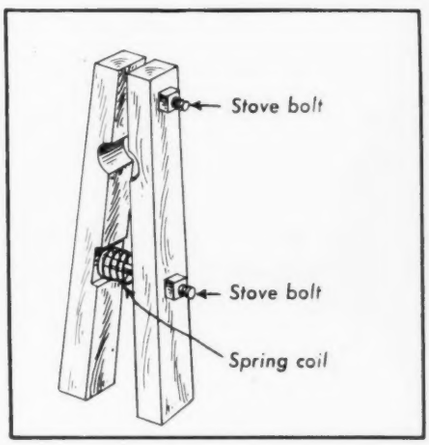
The board should be rounded from the center toward each end on the edge which will bear against the cloth. The other edge of the board should be fastened to the cloth-spreader roll of the loom with leather straps looped over the roll at each end of the board.

In starting a new roll of cloth, the fabric should be passed under the spreader roll instead of over it, as is usually done. The rounded edge of the board should be placed on top of the take-up roll, so that it extends backward and downward over the roll and against the cloth. As the loom operates and the take-up roll puts tension on the cloth, the rounded edge of the board causes any wrinkles in the cloth to pass out of the cloth to one side of the roll. (*K*-484) *H. E. Wenrich, Berwick, Pa.*

Doffers Use Sockets For Winding Racks

We have a large number of spinning frames and twisters in our plant, and we always used the standard pick-motion crank for winding the rack when a frame was ready to doff. Quite often a crank would slip off the pick-gear hub, and frequently a doffer skinned his knuckles against the frame rail.

To eliminate this source of injury, we secured socket wrenches to fit the pick-gear hubs and welded handles to the wrenches. These sockets do a better job than the standard cranks, and they do not slip off the hubs. (*K*-489)



The materials for making this friction-nut wrench can be found around most fixer's workbench.

Friction-Nut Wrench Used by Winder Operator

The friction nuts on our winder and redraw bobbins often become so tight while running that the operator has trouble loosening them by hand. In our plant, the fixers make wooden wrenches for loosening these nuts.

Two pieces of wood 8x1x¾ in. are notched about 2 in. from one end. When these two notches are placed together, they form a roundhole approximately the size of the friction nut on the bobbin.

Leverage is obtained by fastening the pieces of wood together with stove bolts on each side of the notches. The pieces should be joined loosely and in such a way as to permit the bolt in the short end of the wood to act as a pivot for opening the other end of the wrench, which now serves as a handle.

The second bolt, placed about the middle of the pieces of wood, should

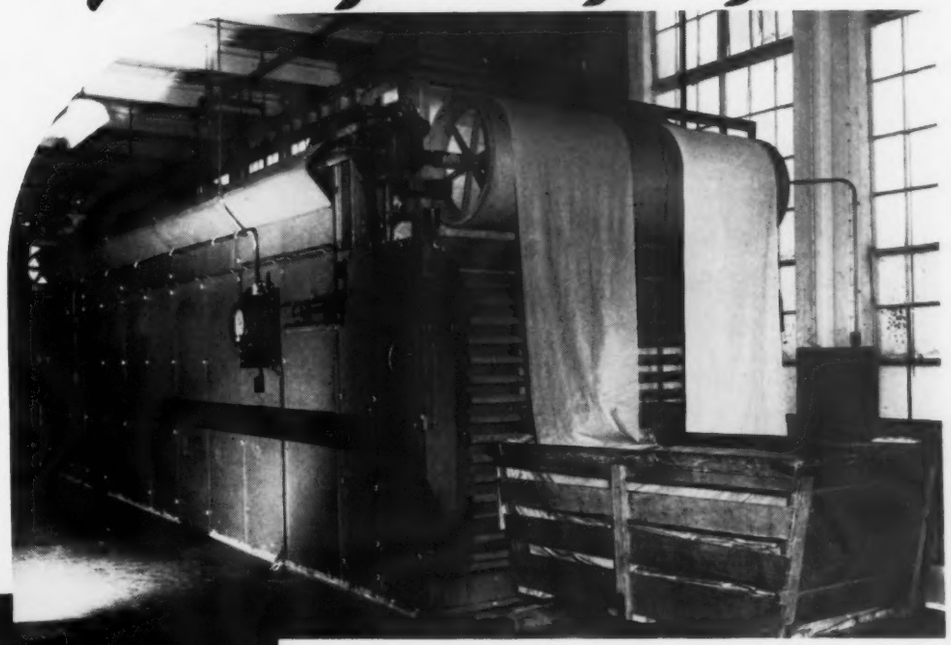
FOR *High Capacity Drying* OF

SILK PIECE GOODS

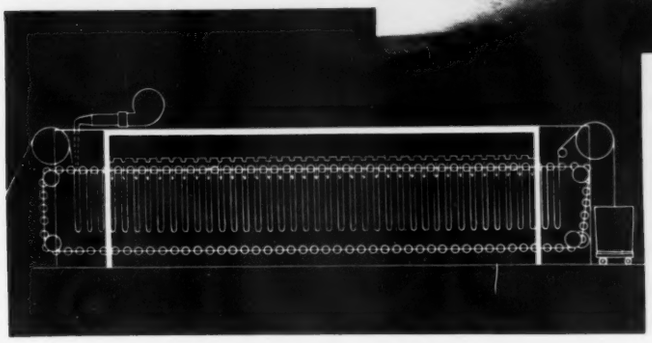
SPUN RAYONS

FINISHED PIECE GOODS

TOWELING

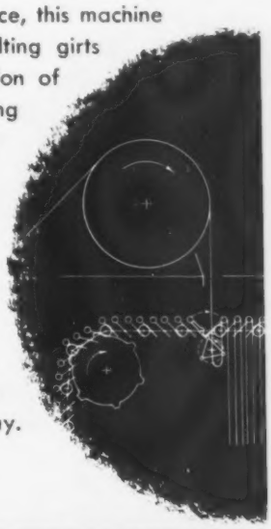


Cross section below illustrates location of nozzles, air circulation, travel of goods through the machine, and clearly shows the positive action of the looping device. Machine may be equipped with automatic folding device or rolling up attachment, depending upon individual requirements.



PROCTOR LOOP DRYER

To meet the demand for maintaining high quality in the drying of piece goods—and at the same time obtain large scale production, many mill men have found the Proctor Loop Dryer to be in a class alone. When this dryer is employed for the drying of *finished* piece goods, such as the spun rayons, it is possible to accurately control the amount of air being directed down into each loop of goods, by means of adjustable baffles. An exterior adjustment makes it possible to exercise this control so that the operator may determine the exact amount of air circulation taking place inside the machine. Such control of air circulation assures perfectly smooth loops and prevents swirling and creasing, which may cause marks in the finished goods. Obviously, in the handling of certain classes of goods, such as toweling, the adjustable baffles are not a necessary refinement. Then, too, the girts, by which the goods are carried through the dryer, revolve intermittently so that no part of the material being dried is in contact with any part of the machine for any appreciable time. This prevents the finished piece goods being marred by stick marks. In order to achieve high capacities in a minimum floor space, this machine is often designed with special tilting girts (illustrated at right). The operation of these tilting girts permits reducing centers between girts and makes possible increased loading of the machine. The girts are tripped to an open position at the time of looping, thereby permitting free loading. If you are engaged in the drying of piece goods, it would be to your distinct advantage to learn the details of this machine. Write today.



PROCTOR & SCHWARTZ • INC • P&S PHILADELPHIA 20 • PA.

KINKS & SHORT-CUTS

(*Continued from page 154*)

be long enough to permit opening the notches sufficiently wide for slipping easily over the friction nut. A spring placed over the bolt on the inside of the handles will automatically open the wrench when the handles are not positively held together. *(K-481)*

Warp Splitting Rods Aid in Slashing Rayon

One of the problems encountered in our mill in Venezuela in sizing viscose-rayon warps has been the tendency of the yarns to stick together as they are delivered by the drying cylinders. To overcome this difficulty, we have made splitting rods similar to those shown in the sketch.

We use a five-cylinder, silk-system slasher, and our warps range in length from 960 to 1280 yd. On 18s yarn the number of ends in the warp ranges from 1800 to 4000, and on 34s yarn from 3200 to 5400. (When necessary in order to get the proper number of ends in a warp, we run as many as four warps from the silk slasher into one warp on a cotton slasher. Before making this run we, of course, allow the warps to cool thoroughly.)

Our size formula is made up entirely from products of Venezuela, and at present it consists of:

Yucca starch	13.20 lb.
White soap	1.55 lb.
Liovateya	0.65 lb.
Carpenter's glue (granulated) ...	1.65 lb.
Water	24.0 gal.

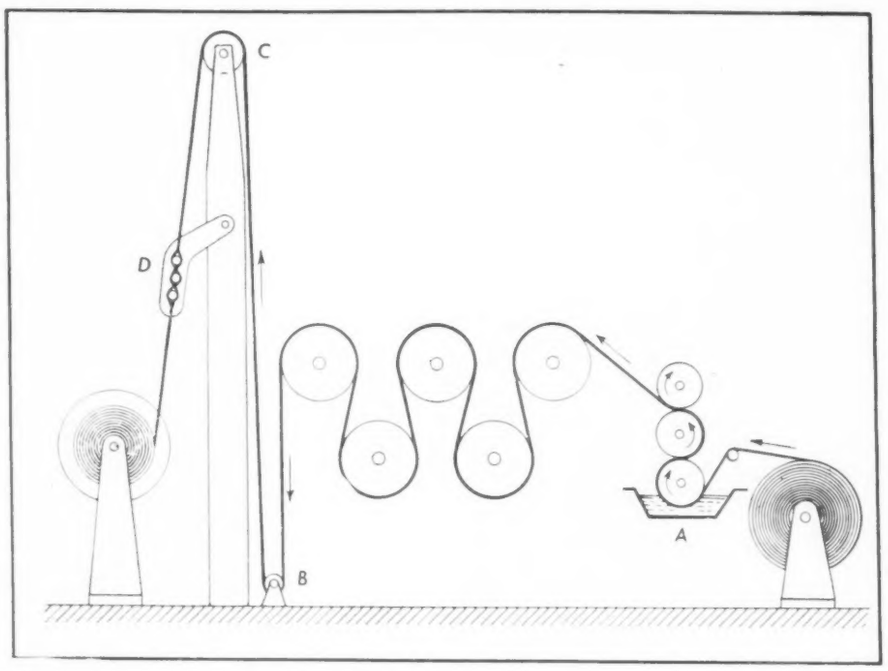
This formula is cooked in free air by means of a coil in a wooden vat.

The warp yarns go through the size box, A, after which they are squeezed twice by the squeeze rolls immediately above the box. The squeeze rolls are covered with four to six windings of cotton material, which is dampened prior to slashing.

When the warp comes off the fifth heated cylinder, the yarns must be cooled and separated before they reach the take-up roll. A metal roll, *B*, is secured to the front of the slasher near the floor; and the warp yarns are passed under it immediately after leaving the last cylinder. Another metal roll, *C*, is secured to a frame at a point about 10 to 12 ft. above roll *B*.

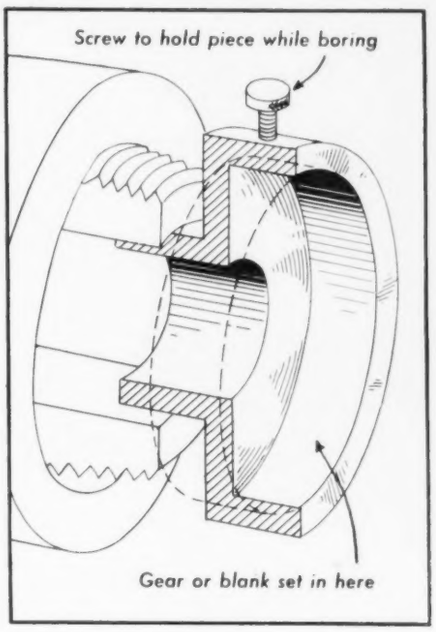
Supports *D* are fastened to the frame at a point below roll *C* which will place the three splitting rods, held in a horizontal position by *D*, near the take-up beam. Supports *D* should be secured to the frame by bolts in such a way as to allow the rods to swing forward or backward to compensate for the size of the take-up package. This arrangement permits the yarns to be pulled over the splitting rods in a relatively straight line.

When using this device, the warp yarns have plenty of time to cool before they are wound on the take-up beam; and we have obtained better results in weaving the warps. *(K-495) Leon Vadon, Valencia, Venezuela*



In addition to providing extra splitting rods, the slasher attachment lengthens the interval of cooling time which elapses between the time the yarn leaves the cylinder and the time it reaches the take-up beam.

Gear-Blank Holder Speeds Lathe Work



The gear blank is placed in the shell holder instead of in the jaws of the lathe chuck.

Textile-mill machine shops cut a large number of change gears, particularly for spinning frames and twisters. In most shops, the procedure consists of cutting the bore and teeth in blanks cast by a foundry. The first step in doing this job is to set the blank up in a lathe and true the chuck and bit, so that the bore will be cut in the center of the blank. Often the time spent in preparation is equal to or greater than the actual cutting time.

Much of this preparation time can be saved by having an easily adjusted holder for the blanks, instead of holding them directly by the lathe chuck.

A shell holder, such as shown in the sketch, can be machined from a piece of steel. Two setscrew holes should be drilled and threaded in the shell on its larger circumference. Setscrews inserted in these holes can be used to hold the blank firmly in place inside the shell.

To use the holder, place the smaller end of the shell in the lathe chuck and secure it with the clamping jaws. Place

A WARP SIZING STARCH THAT STOPS *Fuzz Balling*

NALEX is a warp sizing starch with a chemically controlled viscosity. It insures a uniform sizing forming a strong, smooth and continuous film on fine combed cotton yarns and worsted yarns. It minimizes fuzz balling at the reeds, harness and drop wires.

Viscosity largely controls the degree of size pick-up. Too low a viscosity means insufficient size, inadequate film — and excessive shedding that causes fuzz balling, warp breakages and expensive burling. Too high a viscosity means excessive size, insufficient penetration and hard, brittle yarns lacking the flexibility needed for good weaving. Too varying a viscosity means those soft spots so dreaded by all weaving superintendents.

NALEX — as a result of its chemically controlled viscosity — retains its uniformity in the size box. It sizes uniformly, penetrates deeper, adheres all loose fibers securely, and increases the tensile strength of the yarns. It has increased weaving efficiency in leading mills from 10% to 15% — over ordinary warp sizing. Ask for a NALEX demonstration — NOW! A National technician can run off a few beams without upsetting your regular production.

National also produces: FIBERTEX for textile finishing; AMBERTEX, a heavy-bodied thickener for white discharge, direct and vat color printing; KOVAT, a cold water swelling gum for all textile printing; FLOJEL, uniform, thin boiling corn starches in all standard fluidities; HOOSIER Pearl Cornstarch.

Offices: 270 Madison Avenue, New York 16; Boston, Philadelphia, Chicago, Indianapolis, New Orleans, San Francisco and other principal cities. In Canada: Meredith, Simmons & Co., Ltd., Toronto. In Holland: Nationale Zetmeelindustrie, N. V. Veendam.

National
STARCH PRODUCTS

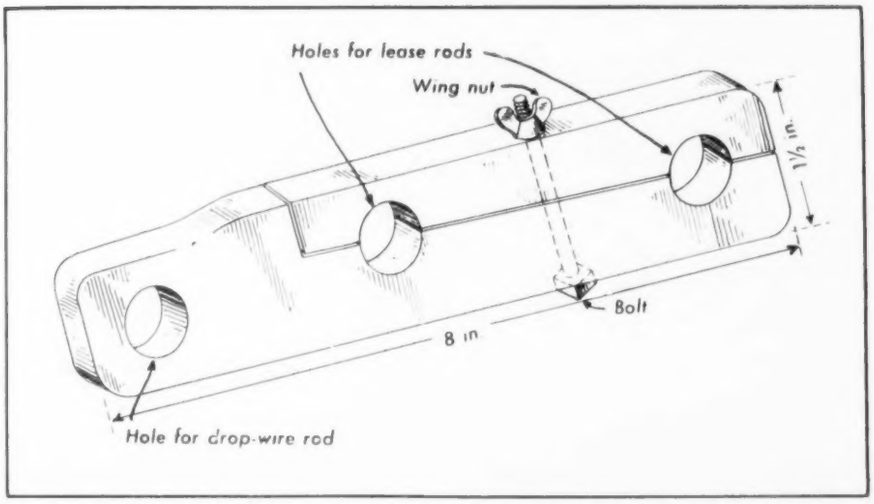
STARCHES — *AND SPECIALTIES WITH EASILY DEMONSTRATED SUPERIORITY*

KINKS & SHORT-CUTS

(Continued from page 156)

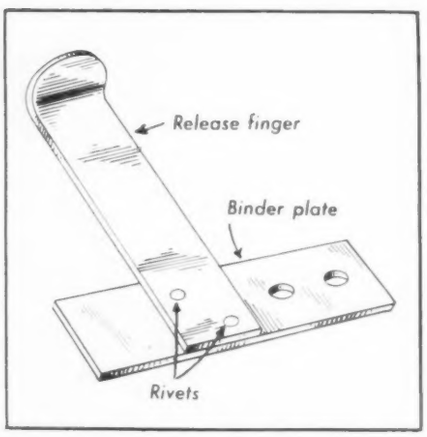
a gear blank in the larger end of the shell and tighten the setscrews. True up the chuck and bit. After the hole is bored in the blank, loosen the setscrews and remove the blank. Place another blank in the holder and tighten the setscrews. The chuck will not need to be trued this time.

By making bushings of different sizes to fit inside the shell, gear blanks of different sizes can be bored. The only time the chuck must be trued again is when a different-size bushing and gear blank are to be used. *(K-483) Richard Dilworth, Pawtucket, R. I.*



The lease-rod clamps hold the rods in the same relative position on all looms.

Binder Release Plate Aids Box-Loom Weaver



The release finger provides leverage for taking binder pressure off a shuttle, so that the weaver can box the shuttle with ease.

In pushing a shuttle past the binder plate into the shuttle box, weavers ordinarily use their thumbs or scissors. If they are somewhat careless or the shuttle is held a little tight by the binder, the weaver may receive a broken fingernail or may cause a rough place on the shuttle by the thumb or scissors slipping.

We have found the release plate shown in the sketch a good investment in weaver satisfaction.

An upright plate, or finger, of thin steel or cast iron, is fastened to the binder plate at the end of the binder. The upright finger should be long enough for the weaver to get a firm hold on it, and it should be strong enough to transfer pressure to the binder to release the shuttle. *(K-477)*

Lease-Rod Clamp Made From Picker Stick

A device which eliminates the use of cord for holding lease rods can be made from a discarded picker stick. By anchoring the holders to the drop-wire rods, all lease rods can be held in approximately the same relative positions on all the looms.

Cut a piece of picker stick about 8x1¼ in., and drill three holes through it at distances desired for holding two lease rods in relation to the drop-wire rod. The holes for the lease rods should be exactly equal in diameter to the diameter of the rods, and the hole for the drop-wire rod only slightly larger.

Saw the picker stick through the center of the two lease-rod holes, and extend the cut to the side of the picker stick, as shown in the sketch. This cut makes two sections of the clamp, the top section of which should be fastened to the bottom section by a bolt and wing nut. When a new lease is to be made, the rods can be freed by unscrewing the wing nut. *(K-478)*

Dyeing Equipment Corroded by Acid Dye

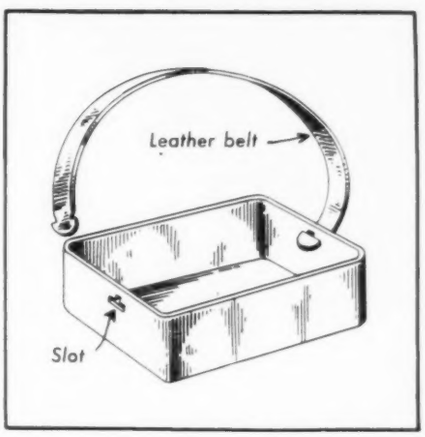
In using certain types of dyes which have a high (8 to 10%) acid content, we found that our stainless-steel equipment was being corroded by the acid. Our first move was to consult the manufacturer of our dyeing equipment. We were advised that the trouble could be overcome by using a better grade of stainless steel; but since this grade of steel was rather expensive and we already had the lower grade on hand, we sought another solution to the problem.

While experimenting with our dye formulas, we held the corrosion in check by washing out the equipment with an alkali after each acid-dye run.

Our experiments revealed that corrosion could be lessened by using a formula containing phosphoric instead of sulphuric acid, but this change increased the cost of the formula. We also found that adding sodium chromate equal to 0.5% the weight of the acid would reduce the corrosive action of the acid. However, when dyeing yellow or blue, this formula did not yield satisfactory color results.

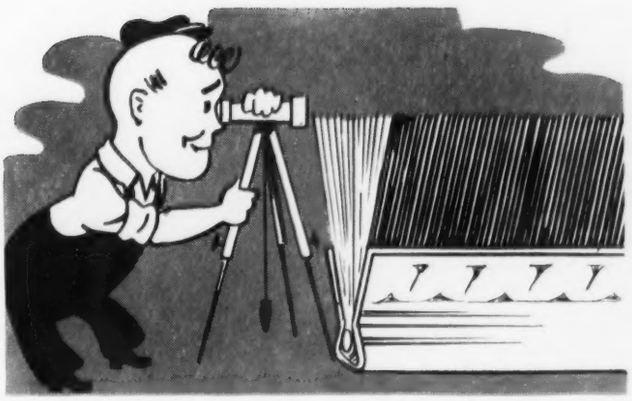
We finally solved the problem by adding the 0.5% sodium chromate plus Calgon to the amount of 1.5% of the weight of the acid. *(K-496)*

Container For Tools Made From Bread Pan

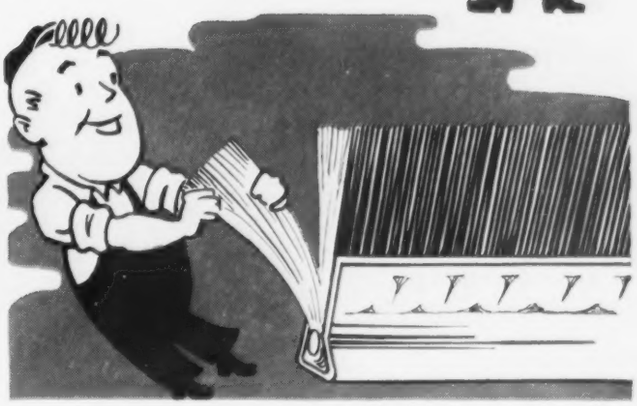


For many years, I have been using a discarded bread pan for carrying tools. When a breakdown occurs on a machine some distance from the tool-box on the workbench, I save making extra trips to the work bench by placing all the tools I will need for the job in the bread-pan carrier. (K-479)

THIS IS WHY FULLER-GRIPT BRUSHES SAVE YOU MONEY



UNIFORM DIMENSIONS. Fuller-Gript brushes are accurately manufactured so that the dimensions are uniform throughout the length of the strip. Result — more efficient brushing action.



NO SHEDDING. Brush material is rolled under heavy pressure into a heavy gauge metal strip where it is held in a vise-like grip. Filler material cannot fall out. Result — a more efficient job.

CORROSION-RESISTANT. Another reason why Fuller-Gript brushes last longer is because the metal "backbone" is highly resistant to both chemicals and water. Result — a brush that lasts longer.

EASY TO INSTALL AND REPLACE. Simple anchoring devices enable your own maintenance men to install most brush strips in a few minutes so securely that they will not fly off high-speed cylinders.

* * *

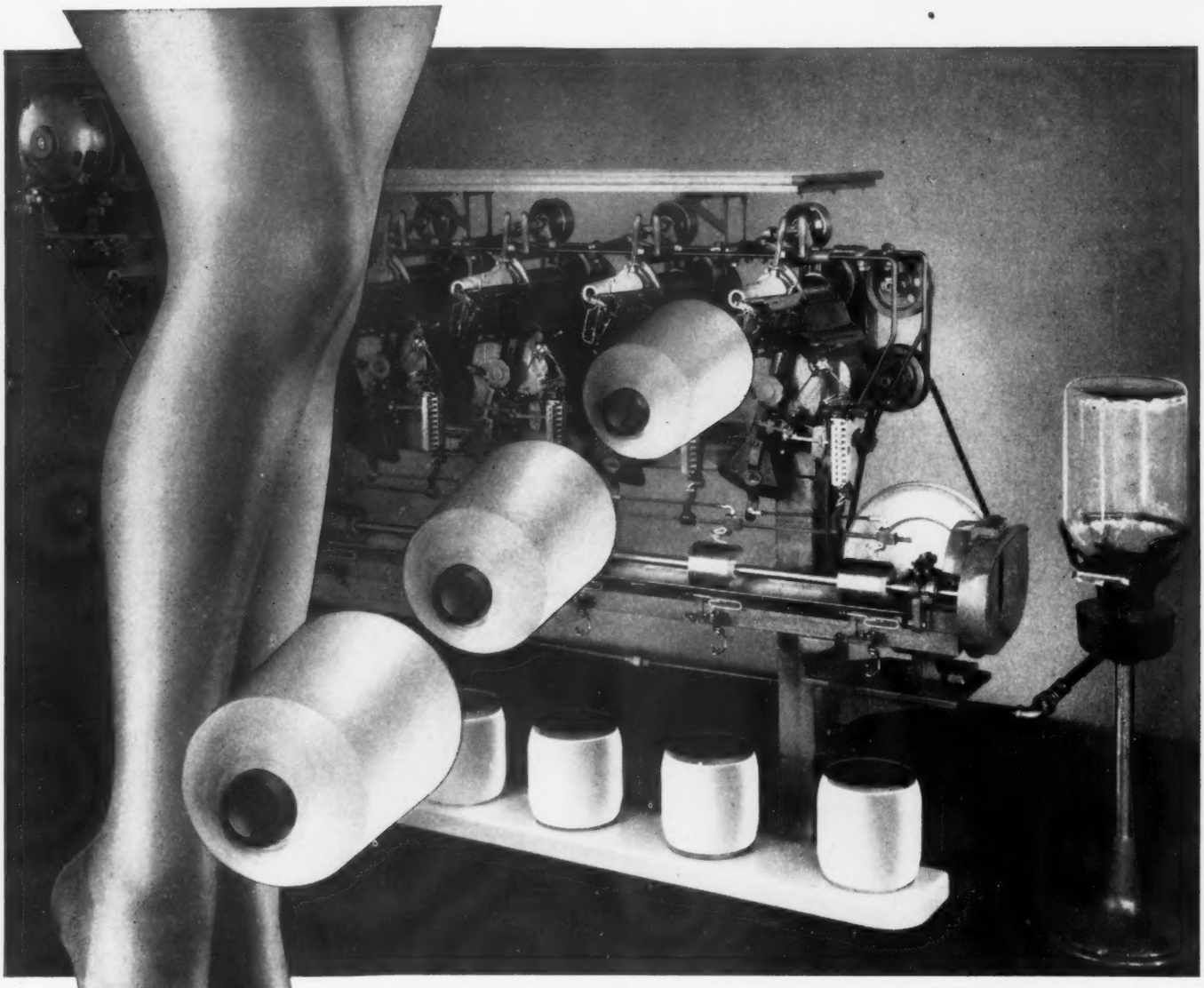
Fuller-Gript Brushes can be furnished in straight strips or spirals of any length, they can be coiled around cores ranging from one-quarter inch to three feet in diameter.

Give our engineers an opportunity to specify the correct application of Fuller-Gript Brushes to your equipment. We will be pleased to send you a sample Fuller-Gript strip. No obligation.

Fuller Gript

BUILT-TO-ORDER BRUSHES FOR YOUR EQUIPMENT

THE FULLER BRUSH COMPANY
INDUSTRIAL DIVISION
3594 FULLER PARK, HARTFORD 2, CONNECTICUT



THE MACHINE THAT SIMPLIFIES PINEAPPLE CONING OF NYLON

Universal Sizing Tubes of nylon, wound on the No. 250 machine, go directly to the No. 50 machine (without an intermediate redraw operation) to be converted into pineapple cones for knitting.

The No. 50 machine with Pineapple Coning Attachment has been designed to provide the simplest, most trouble-free arrangement of handling the yarn.

Tension is minimized by the straight thread line from supply tube to oiling roll . . . fewest possible contact points . . . slow spindle start . . . automatic release of tension as package diameter increases . . . and the new Roller Bail which revolves with the yarn at the delivery point.

Emulsion roll speed is uniform, and the amount of oil pickup is controlled from inside to outside of the cone by an automatic means of lengthening the contact of yarn with the roll to compensate for increase in yarn takeup speed. Tension and pressure are easily controlled to provide the package formation that knitters prefer.

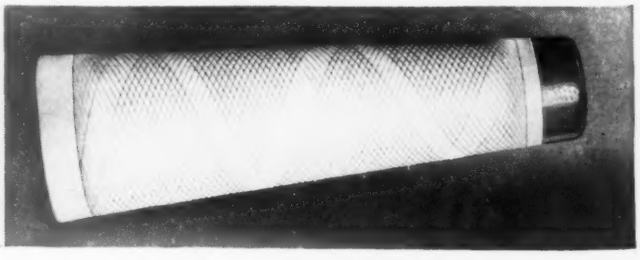
LEESONA

Reg. U. S. Pat. Off.

Universal Winding Company, Providence, Boston, Philadelphia, Utica, Charlotte, Atlanta. **See catalog in TEXTILE WORLD YEARBOOK.**

23-5-6

MORE THAN 90% OF ALL SYNTHETIC FILAMENT YARN ON CONES IS PRECISE-WOUND ON THE FLEXIBLE 50



LETTERS to Pete & Bill, discussing material in this department, are paid for when published. Suggestions for the Pete & Bill dialogue will also be paid for if used. If these pages interest you, contribute something to interest others. Address PETE & BILL, Textile World, 330 West 42nd St., New York 18, N. Y.

Pete & Bill

QUALITY-CONTROL MEETINGS

Do quality-control meetings result in useless departmental buck-passing and alibi-toting, or do they help supervisors to find the true causes of bad work?

THAT WAS A GOOD QUALITY-MEETING BILL. WE ALL KNOW WHAT TO LOOK FOR NOW.
NO SUCH THING, PETE. YOU GUYS JUST UNLOADED ON THAT NEW FOREMAN BECAUSE HE WAS NEW AND WOULDN'T SAY MUCH. A SWELL WASTE OF TIME!
1
BILL, WE TOOK UP ALL THE DEFECTS AND TRACED THE POSSIBLE CAUSES - THAT'S EDUCATIONAL IN ITSELF.
YEAH, AND I NOTICED THAT ALL YOUR POSSIBLE CAUSES WERE IN THE OTHER FELLOW'S DEPT. TEXTILES ARE TOO BIG TO PIN DOWN EVERYTHING UNDER A MICROSCOPE
2
WELL, WE DIDN'T GET ALL THE ANSWERS, BUT I INSIST QUALITY MEETINGS ARE WORTHWHILE - PERMIT EXCHANGE OF IDEAS AND INFORMATION - ALLOW MANAGEMENT A CHANCE TO EXPRESS ITSELF
YOU'D GET A BETTER EDUCATION, IF YOU'D JUST WATCH YOUR OWN JOB. A MEETING DOESN'T RUN A MILL.
3
THERE ARE PLENTY OF MILL MEN OUT THERE IN OUR AUDIENCE WHO WILL TELL YOU YOU'RE WRONG, BILL.
YEAH, THERE'RE LOTS OF THEM WHO WILL TELL ME I'M RIGHT. WON'T YOU WRITE IN, MR. MILL MAN?
4

Letters From Readers

Patting Is Better Than Slapping

"Getting Cooperation from Assistants" (Pete & Bill, Mar. 1946)

Dear Pete & Bill:

Pat the back of a responsible person and you have gained a friend as well as an assistant. Bawl him out with harsh words and you will find that cooperation thereafter will be lacking to some degree.

It is evident that not everything can be 100% up to standard at all times. It is also apparent that mill workers, overseers, and their assistants are trained to be as careful as possible in the handling of goods in process yet seconds are bound to occur once in a while. There should be a reasonable tolerance allowed, else the ordinary worker would not and could not remain on any particular job for any length of time. However, records should be kept of imperfections and their makers in order to differentiate between excellent, average, and below-average employees. The latter group should be dismissed immediately if the standard of goods produced is to be kept at a high level.

Again, I reiterate, pat the back of the assistant instead of giving him an oral lacing, and he, in turn, will look toward a better product and higher efficiency from the everyday worker. (PB 502)

Rest Periods Are Good Things

"Rest Periods and Production" (Pete & Bill, Apr. 1946)

Dear Pete & Bill:

On first thought, it seems to be a great loss to the plant to curtail production for 15 minutes for relaxation when a plant employs several thousand persons; but, it is my opinion that this would not be the case, for the recess period would give the workers a greater incentive to work. It would create good feeling among the workers when they realized that the management had their welfare at heart.

The average worker likes to feel that he is not considered a machine but a human being and is treated as such.

Of course, there are some jobs which

would be impractical and impossible to stop without causing damage to the product; for example, if a man were to stop work on a dyeing machine and let stand, it would cause the fabric to have uneven places. Then there is the rayon industry. These machines must be kept going continuously and the same thing applies to paper-making machines. Perhaps plants which have these problems of continuous operations could work out a plan in their own plant. (PB 504)

Give Yourself the "Once-Over"

"Getting Cooperation from Assistants"
(Pete & Bill, Mar. 1946)

Dear Pete & Bill:

Instead of giving your assistant a "bawling-out," just give yourself "The-Once-Over." Realize that your assistant is carrying on with something for which you yourself are responsible; and that it is your duty to be sure that the work is done in a satisfactory manner. Be sure that he understands clearly what is required, and then follow along with encouragement, or suggestions. Be sure that you are striving to be a "leader of men" and not a Boss. (PB 503)

Encourage Loyalty and Favor Seniority

"New Slant on Favoritism"
(Pete & Bill, Jan. 1946)

Dear Pete & Bill:

When a new bank—or set—of machines is placed in a mill there is pretty generally a scramble to be placed on that set. I suppose it could be traced to our inate love for the new. It is my opinion that these machines should be given to those operatives who, by loyalty and seniority, are entitled to them. When faced with the argument that the new machines are more efficient than the old, I always incline to the point that they shouldn't be—barring a great disparity in age or type. And from this point the situation is placed in the hands of the men who are responsible for keeping all machines in good running order. Actually there is little difference (maybe 1 or 2%) in production between a good new worker and a good older worker—from service point. And the good done general morale through giving the newest to the oldest will far outweigh the production benefits if done the other way around.

As for the returned service men, I believe and practise that they are entitled to the best and newest in machines, and find that nothing is lost through this practise. (PB 501)

Books of Interest

The Full Story of Fibrous Proteins

SYMPOSIUM ON FIBROUS PROTEINS; Society of Dyers & Colorists, Bradford, England; 166 pages, illustrated; 27½ shillings.

This volume is the printed record of 29 addresses included in the symposium on fibrous proteins held at the University of Leeds, Leeds, England, on May 23 to 25, 1946. This assembly of information is international in character and of importance to all associated with textiles and textile dyeing. It includes the record of extensive research in the chemistry, physics, and manipulation of fibrous proteins.

The speakers were principally English, but several came from Holland, Norway, Australia, and the United States. Among the latter were Milton Harris and A. E. Brown of Washington, whose paper on "Natural and Synthetic Protein Fibers" is included in the publication but not read at the meeting; and J. R. Dudley and J. E. Lynn, of American Cyanamid's Stamford, Conn., Laboratory, whose paper "Shrinkage Control of Wool" was similarly handled.

Fashion and Its Many Sources

ONE WORLD OF FASHION, by M. D. C. Crawford; Fairchild Publishing Co., New York 3, N. Y.; 60 plates; $10.00.

"Art and fashion are separated only by the element of time," writes Mr. Crawford in the introduction to this painstaking compendium of clothing and accessory styles from 3500 B. C. to 1942 A. D. "Any art may become an inspiration for fashion. . . Fashion may be the whim of the moment, an expression of transient desires and aspirations of a season or a few brief years, but it is composed of constantly renewed elements which are more ancient than any written history."

Mr. Crawford has drawn on many sources to bring together in one portfolio, measuring 12 × 18 in., hundreds of sketches showing what was contemporaneous fashion at one time or another in many widely separated parts of the world. He has related the older with the newer, and indicated the influence of ornament in stone buildings or brass utensils with fabric decoration.

The portfolio is intended to be a part of the working equipment of the designer, and as a basic guide for broader research, rather than as a reference work or a chronicle of the modes. It is another step in drawing the designer to the great museum collections which are available in most metropolitan centers. Mr. Crawford has the thesis that no industry ever can be greater than its inspiration; hence the source of the inspiration should be of the best.

Information on Training Veteran Apprentices

SETTING UP AN APPRENTICESHIP PROGRAM, Apprentice-Training Service, U. S. Dept. of Labor, Washington 25, D. C.

In answer to the growing demand for a comprehensive explanation of how to establish an apprenticeship program and the procedures when employing veterans as apprentices, this 30-page booklet has been compiled and issued as a guide to employers in training veterans for the skilled trades.

The booklet explains how to determine the various provisions to include in an apprentice-training program, as well as the steps an employer must take to obtain approval as a qualified "training institution" for veterans, and the steps a veteran must take to derive the benefits of the G. I. Bill of Rights.

The booklet contains a complete list of State agencies designated by governors to approve business establishments and educational institutions under that bill to train veterans; as well as other State and Federal agencies with which employers will have some dealings in setting up an apprenticeship program.

"White-Collar" Crime Receives Attention

EMBEZZLEMENT AND INTERNAL CONTROL, by Albert E. Keller; Warner-Arms Publishing Co., Washington, D. C.; 239 pages; $3.00.

Actual embezzlement cases, some involving cotton mills, are cited in this new book. It is designed to be helpful to executives in combating embezzlement and other insidious losses. The book is an outgrowth from many talks by Mr. Keller.

SARAN

The Dow plastic for "wear-conditioned" upholstery

New standards of textile serviceability are being created by Saran (pronounced Sah-*ran*).

In upholstery for automobiles, homes and public buildings, this Dow-developed plastic shatters old ideas of wear and creates enduring beauty. Fabrics woven from Saran monofilaments are strong and resilient—*and stay that way!*

Saran does not show wear. Saran will not snag or scuff. Saran will not rot or stain. It is unaffected by water. It is impervious to most chemicals. And it will not absorb dirt.

A damp cloth will keep Saran clean!

And Saran's beauty is "locked in." Saran's glowing colors permeate each tiny strand. So those colors can't wear off. And they're sunfast. They *stay* bright.

Look to your future in textiles! Choose Saran for your toughest jobs—it can take it!

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit
Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle

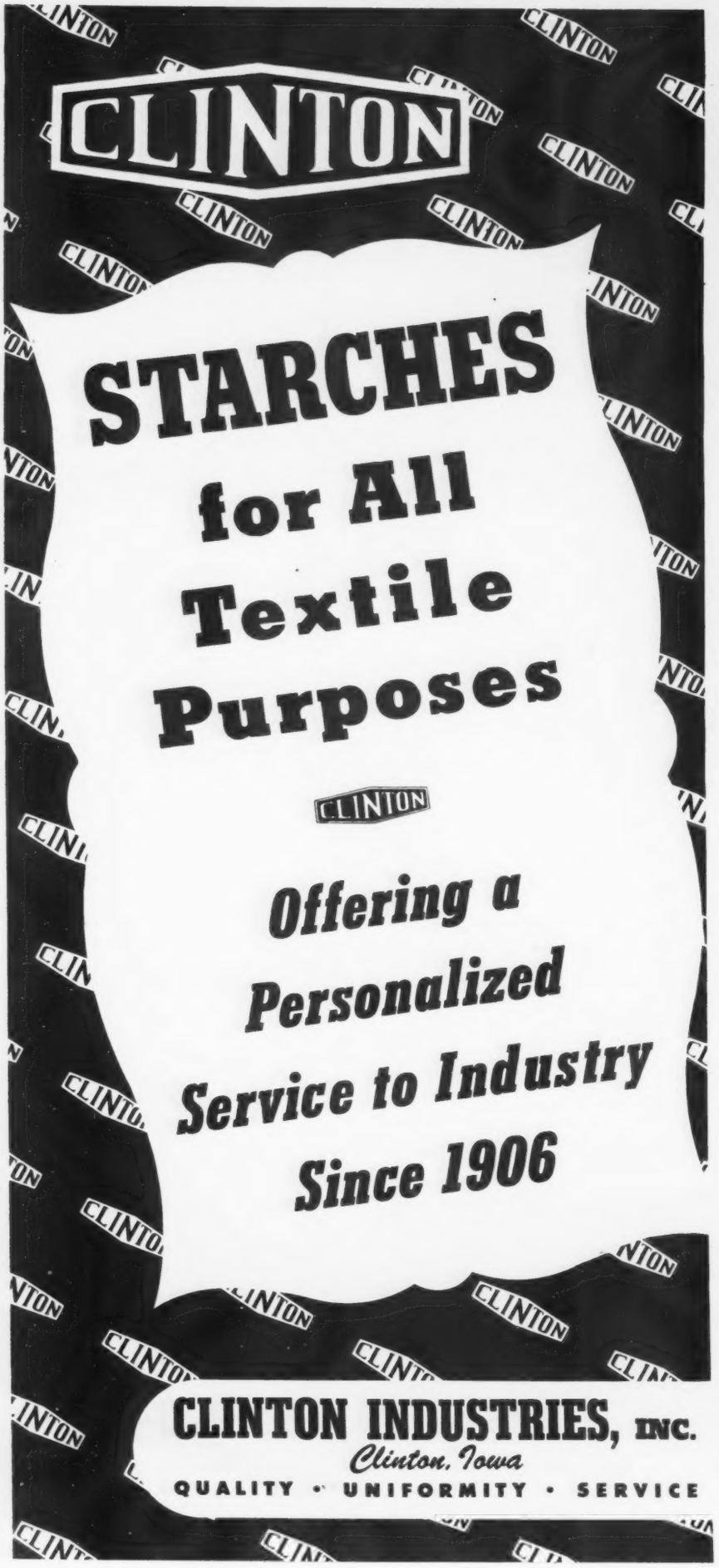
FOR BETTER FABRICS, LOOK TO SARAN

Saran compositions, produced by Dow, are extruded as monofilaments by skilled licensees. They can give you more information about Saran and its possibilities. Dow licensees include:

- ★ Irvington Varnish & Insulator Co., Irvington, New Jersey
- ★ The National Plastic Products Company, Odenton, Maryland
- ★ Visking Corporation, Chicago, Illinois
- ★ Western Felt Works, Chicago, Illinois

DOW

PLASTICS



Round Table

FOR EXCHANGE OF IDEAS

The Round Table is designed to supply a meeting place where mill men can discuss problems among themselves. It is open to all readers for discussion of subjects relating to mill management and operation. Names of contributors to the Round Table will be held confidential if so requested, but sign contributions with your real name and address as evidence of good faith and to permit payment for items published. Address contributions to: Editor Round Table, Textile World, 330 West 42nd St., New York 18, N. Y.

Reeding Mixed Warps Requires Experimentation

We weave a large variety of fabrics in many patterns and of various fibers, including decorative designs of silk and synthetic fibers in worsted fabrics. We have found that paying more than usual attention to reeds and to the method of reeding our warps saves us a considerable amount of seconds.

The reed has three general functions: (1) it spreads the warp threads evenly, (2) it beats the filling pick into the fell of the cloth, and (3) it guides the shuttle across the loom on the pick.

Reeds must be carefully and systematically checked to make certain that no bent, dented, or chipped reeds are used. Any of these conditions will cause trouble, such as reed marks and continually breaking warp threads.

There are two general methods in practice for establishing the size reed to use. One is to use the same size reed for any pattern in a given cloth. For example, in a cloth with 4,200 ends, reeded (when plain) 15 reed, 4 per dent, at 70 in. width, any fancy pattern in this cloth—whether it has 4,200 ends, or more or less—would be reeded with a 15 reed and the difference in ends

Accent on Elegance

This masterful blending
of fur and fabric
was no mere accident.
The fabric had to be worthy
of the fur—the fur
worthy of the fabric.
Yes, when the accent is on
elegance, fashion creators
must be exacting . . .
to the last detail!

And that exactness explains
why so many leading
mills, converters, finishers
and dyers have turned to
Colgate-Palmolive-Peet
for high-quality wetting,
fulling, scouring
and dispersing agents.

There is a C.P.P. soap
or synthetic detergent for
every type of fabric—
for every processing problem.
Ask your local
Colgate-Palmolive-Peet
representative for detailed
information on the full
line of C.P.P. processing
agents made for the
textile industry. Or, write to
Industrial Department,
Colgate-Palmolive-Peet Co.

•

COLGATE WHITE SOAP FLAKES

ARCTIC CRYSTAL FLAKES

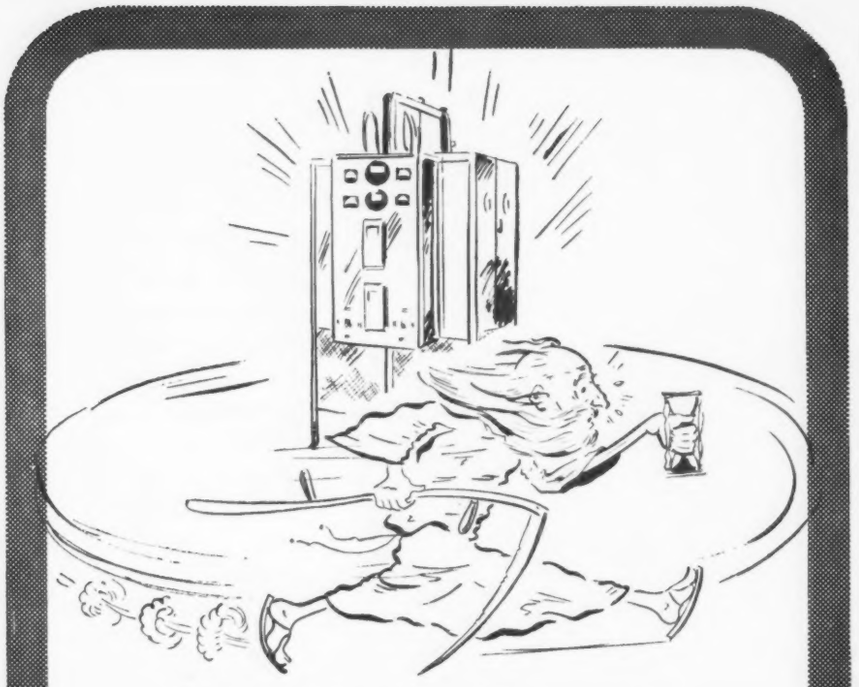
BADGER FLAKES

ARCTIC SYNTEX "A" AND "T"

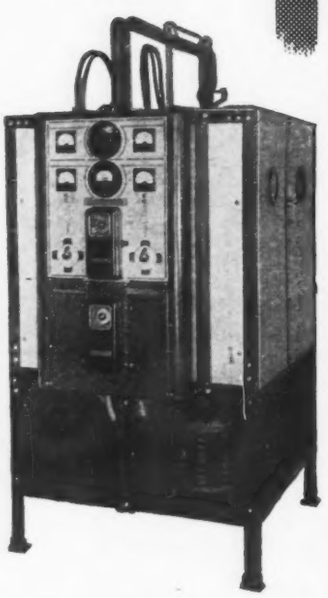
COLGATE FORMULA 10

Colgate-Palmolive-Peet Co.

JERSEY CITY 2, N. J.
ATLANTA 3, GA.
CHICAGO 11, ILL.
MILWAUKEE 4, WISC.
KANSAS CITY 3, KANS.
BERKELEY 2, CALIF.



Speed up Father Time by using an Atlas Weather-Ometer



Years of actual exposure to weathering are reduced to a few days testing in the Wether-Ometer.

The deteriorating effect of exposure to weather is a factor that must be known to positively assure the dependability of materials used outdoors. Fabrics, finishes, paints, rubber, plastics and hundreds of other products can be tested in the Weather-Ometer and their resistance to the deteriorating effects of outdoor exposure determined.

The Weather-Ometer produces an accelerated weathering action by controlled cycles of light, water spray, selected temperatures, and humidity. Operation is completely automatic, can be left running without attention 24 hours a day. Various materials can be given exactly the same test by setting the Cycle Meter according to the prescribed test program.

Used all over the world

★ WEATHER-OMETER
★ LAUNDER-OMETER
★ FADE-OMETER

SALES REPRESENTATIVES IN PRINCIPAL CITIES THROUGHOUT THE WORLD

ATLAS ELECTRIC DEVICES CO.
361 West Superior Street, Chicago 10, Illinois

taken care of by reeding some dents with more or less than 4 per dent, as the case would require. The second and, in the writer's opinion, the better method is to use the reed size that will allow for the best weaving possible. On the 4,200-end fabric, I would, if necessary, use a 14 or 16 reed, if by so doing I could assure an easier weaving job.

It is true that the first method assures the finisher that the cloth will reach the finishing room at a constant width, and there is no doubt that this condition is an aid to that department. It is true, also, that a mill needs fewer sizes of reeds in stock through this method. This method does not, however, insure uniformly good weaving conditions.

Concerning the width in the loom when a reed of different size from the standard for the cloth involved is used, practice shows that no harm will be done if the loom width is ¾ in. greater or smaller than the reed; and with this 1½-in. leeway, almost any warp can be reeded in a manner to obtain the best weaving possibilities.

When reeding a pattern, the desired effect, naturally, is to obtain an even spread of ends. In passing, it might be worth mention that the widely held opinion that a 4-harness weave must be reeded 4 per dent, a 3-harness weave reeded 3 per dent, etc., is not backed up by practical experience. It is much more desirable to reed a warp to suit the yarn in the warp. If a heavy yarn count is used, it is better to use a coarser reed and thus allow the knots that will come along plenty of space to work through without breaking the end or causing other trouble.

If the "standard-reed" method is followed, wherever fine decorative ends—such as silk or spun rayon—are used, it is necessary to reed these up; that is, reed 5 or 6 ends per dent, thus crowding the decorative ends which are likely to weave not so well as the worsted ends in the warp.

If the second method is followed, these ends may or may not be reeded closely. If two ends of silk or spun rayon are together, it is not necessary to crowd them in the reed; they may be reeded 4 per dent. Not only will they finish the same way, but they will also weave better. Where cords are used, it is a good practice to reed these more openly—as three ends per dent at the spot where the cord is laid in, if only one of the three ends is a cord. If several cords are laid together, they will require special treatment. It makes no difference in the appearance of the finished piece whether, in a fabric generally reeded 4 per dent, these cords are reeded three ends per dent alongside

Regardless of the Fibre you Handle

...Bleach it with BECCO Hydrogen Peroxide!

Whether you bleach your goods in kiers, in package or other machines, by the cold bleach or by continuous steam bleaching methods, Becco Hydrogen Peroxide is the ideal bleaching agent. This is true whether you handle cotton, wool, knit goods, rayon or other natural and synthetic fibres.

And remember that Becco Hydrogen Peroxide is very easy to handle. It is shipped in drums or tank cars. It can be pumped or automatically fed to the point of use. This is especially important for efficient continuous operation.

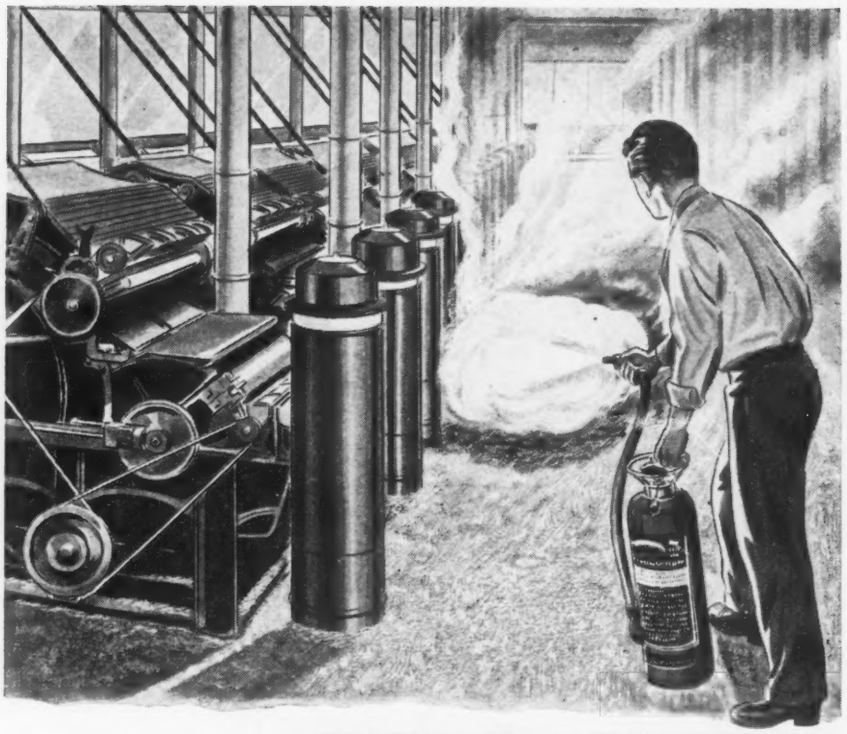
Why not take advantage of Becco's many years of specialized bleaching experience? Ask our engineers and chemists to advise you what system is most suitable for processing your goods, regardless of the type of fibre used. This bleaching "know-how" can be yours, free. Write to

BECCO SALES CORPORATION

AGENTS FOR BUFFALO ELECTRO-CHEMICAL CO., INC.

6 Sawyer Avenue, Buffalo 7, N. Y.

New York Boston Philadelphia Chicago Charlotte



INSTALL DUGAS EXTINGUISHERS AT THESE HAZARD SPOTS

- Picker and Opener Rooms
- Cards
- Drawing and Slubbing
- Spinners
- Condensers
- Electrical Equipment
- Flammable Liquids

STOP FLASH FIRES

...instantly!
WITH

AN ANSUL PRODUCT
duGas
THE MASTER OF FLAME

DRY CHEMICAL

● Upon striking fire, DUGAS Dry Chemical instantaneously releases 1100 times its volume in flame-smothering gas that chokes off fire in seconds.

This instantaneous action of DUGAS Dry Chemical stops LINT FIRES and the dry chemical on the unburned material is a fire-retarding agent preventing spread of the fire.

The prompt use of a DUGAS Extinguisher makes the damaging use of water unnecessary or a small quantity of water may be required on any smoldering lint. DUGAS Dry Chemical is non-corrosive . . . non-conductive and non-abrasive.

In addition to providing lint fire protection, DUGAS Extinguishers are highly effective on fires in live electrical equipment and flammable liquids.

DUGAS 33-T HAND EXTINGUISHER

GET THE FACTS ON DUGAS EXTINGUISHERS

Write today for further information including authoritative, impartial data showing characteristics of all types of approved fire extinguishers. The Ansul technical staff of fire protection engineers is ready to serve you.

Listed and approved by Underwriters' Laboratories and Factory Mutual Laboratories.

SEND FOR BULLETIN No. 621

ANSUL CHEMICAL COMPANY
FIRE EXTINGUISHER DIVISION, MARINETTE, WISCONSIN

the striping or are placed in the center of the ground.

In the case of a pin stripe, some mills reed the two ends in the same dent and some insist that they must be cut by the reed. I have done both and find that there is no difference either in weaving or in the finished appearance. *(R-278)*

Non-Progressive Attitude Deplored by Reader

I am not a gadget king, but I am sales minded. It seems to me that the greatest drag on the textile industry is the non-progressive state of mind of the men in the industry.

Being particularly interested in the cotton branch of textile manufacturing, I can honestly state that I know of more than one plant which is making the same products, on the same machinery, and in exactly the same manner as it was doing 20 or 30 years ago. Is it a wonder that synthetic fibers are cutting in on cotton?

If such plants as these would fall in step with the few modern cotton mills and if operating officials and workmen would strive to produce better and more salable items, the cotton branch of the textile industry would wake up. Accomplishing this task would not require Rube Goldberg inventions or gadgets, but it would require sound experimentation and improvement. *(R-280)*

Grease Called Unsuitable For Winder Gainer Case

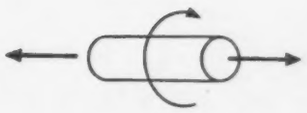
In *Kinks and Short-Cuts* in the March issue, a method for lubricating the gears in the gainer case of the #50 Universal winder is suggested. We wish to state that we cannot approve the method suggested.

Oil is used in a #50 gainer case, through the splash system, to lubricate the cam-shaft bushing, the idler and intermediate-gear studs, as well as the gear teeth. When grease is used, as suggested, there will be no lubricant reaching the cam shaft and gear studs. *E. R. Swanson, Universal Winding Co., Providence, R. I.*

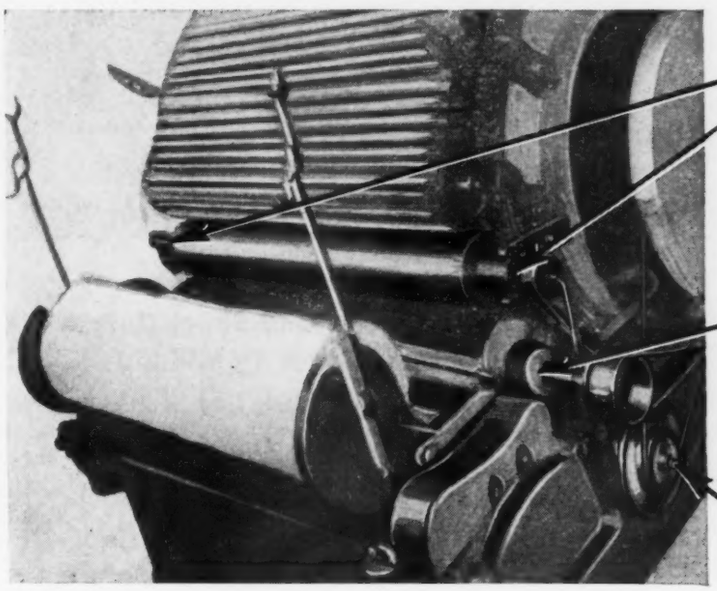
I would think that there would be sufficient lubrication impregnated in the cam-shaft bushing, gear studs, and gears so that its absence would not show up for some time, but we are afraid that the idea would not work out and that all parts of the gainer case would not be properly lubricated.

We advocate filling the gear case

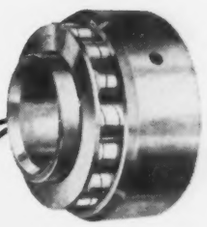
IN THIS *HYATT* ROLLER BEARING A SHAFT CAN DO TWO THINGS AT THE SAME TIME



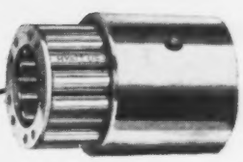
ROTATION AND TRANSLATION SIMULTANEOUSLY



In sturdy Hyatts—Saco-Lowell's continuous card stripper smoothly spins and slides simultaneously. About 15,000 bearings installed.



On STRIPPER SHAFT wound type HYATT rollers spread grease back and forth over bearing surfaces preventing wear.



LICKER-IN holds its setting when mounted in this type HYATT. Ask for it in your new cards.

In the STRIPPER DRIVE IDLER this type HYATT HY-LOAD Bearing is standard equipment. Saves lubricant, lasts almost forever.

THE SACO-LOWELL STRIPPER SHAFT must slide back and forth while it revolves at fairly high speed. It performs these functions in a very simple way because of the design of the Hyatt Bearing in which it is mounted.

No oscillating ball and socket housings or other complicated, costly mechanisms are used.

The roller bearing, installed in a rigid housing, runs smoothly for an unbelievably long life because it distributes loads properly and circulates the lubricant efficiently.

Many of these bearings are still operating satisfactorily after fifteen years of service. Thousands more are being installed.

This successful roller bearing application is the result of open-minded, progressive thinking by Saco-Lowell engineers, plus the anti-friction bearing know-how of Hyatt.

You can obtain this same good roller bearing performance in all your textile machinery. Ask for Hyatts by name and get long trouble-free roller bearing life.

HYATT BEARINGS DIVISION • GENERAL MOTORS CORPORATION

Harrison, New Jersey • Chicago • Detroit • Pittsburgh • Oakland, California

Here's all you pay for cash to buy

MACHINERY *and* EQUIPMENT

Your total cost for each $1000 of financing

12-MONTH TERMS.....$ 32.50

24-MONTH TERMS.....$ 67.50

36-MONTH TERMS.....$107.50

Do you need machinery and equipment to improve quality? . . . reduce costs? . . . increase production? . . . put you in a better competitive position? The cash to buy it is readily available at low cost, as the above table shows.

Under our Machinery and Equipment Purchase Plan you make a small down payment and we supply the rest. You repay us monthly out of increased earnings or savings effected by the equipment.

All your purchases of new or used machinery and equipment . . . even equipment engineered and built to meet your special requirements . . . can be financed at uniformly low cost under this one simple plan.

A booklet giving more information about the broad scope, simple operation and low cost of using this plan is yours for the asking. Just write to the nearest office listed below and ask for Booklet No. HI-2.

DO YOU SELL
MACHINERY AND EQUIPMENT?

Whether you are a manufacturer, distributor or sales agent, you can use our Machinery and Equipment Purchase Plan to stimulate sales... and receive your full selling price in cash immediately...without any cost, credit risk or contingent liability on your part. Write for information.

COMMERCIAL FINANCING DIVISIONS:
Baltimore, New York, Chicago, Los Angeles, San Francisco, Portland, Ore.

COMMERCIAL CREDIT COMPANY
Capital and Surplus more than $80,000,000
BALTIMORE 2, MD.

FINANCING OFFICES IN ALL PRINCIPAL CITIES OF THE UNITED STATES AND CANADA

only to the depth of the lower rim of the cam-shaft gear; and we have found that when this advice is followed the gear case, including the gear studs and the camshaft bushings, is adequately lubricated without seepage. If oil is poured in to a greater depth, it is thrown up in such volume that it may work to the outside of the case *(R-277) W. Kellogg, Universal Winding Co., Providence, R. I.*

Before publishing the kink "Spongy Grease Stops Loss of Gainer-Case Oil," TEXTILE WORLD raised the question of oiling the parts mentioned in these two letters with the contributor of the kink. The contributor—a practical mill man—assured the editors that he had adopted the use of this grease only after years of experimentation with a variety of oils and greases and that he had obtained excellent results from its use.—*Editor.*

Kinks and Short-Cuts Valuable to Mill Man

Your *Kinks and Short-Cuts* department has been a great help to me on several occasions. I think it is one of the best departments in good textile book. *(R-274)*

Special Window Paint Applied Once Each Year

For a number of years we used cloth and wooden-slat roller shades on the windows of our plant to reduce sun glare. Because of the initial cost, upkeep, difficulty of keeping both types of shades clean, breakage of wooden slats, and the necessity for closing the shades and shutting out needed light, we looked about for a satisfactory substitute.

A blue, water-vehicle window paint —applied thinly with a spray gun—was tried. This paint was effective in killing the glare, but we did not like too well its depressing color and the fact that it shut off continuously needed light. After one season, it had faded to a considerable extent, was streaked, and was hard to remove.

Two years ago we found an oil-vehicle paint cheaper per gallon and with greater covering capacity than the water-vehicle paint, which looked good. Although the paint was called a dark blue by the manufacturer, when sprayed on it seemed to be too light and did not kill the glare. The addition of eight teaspoonfuls of a Prussian-blue mixture (a 25c tube in a pint of turpentine) gave a tint which let in a maximum of light and at the same time shut out the sun

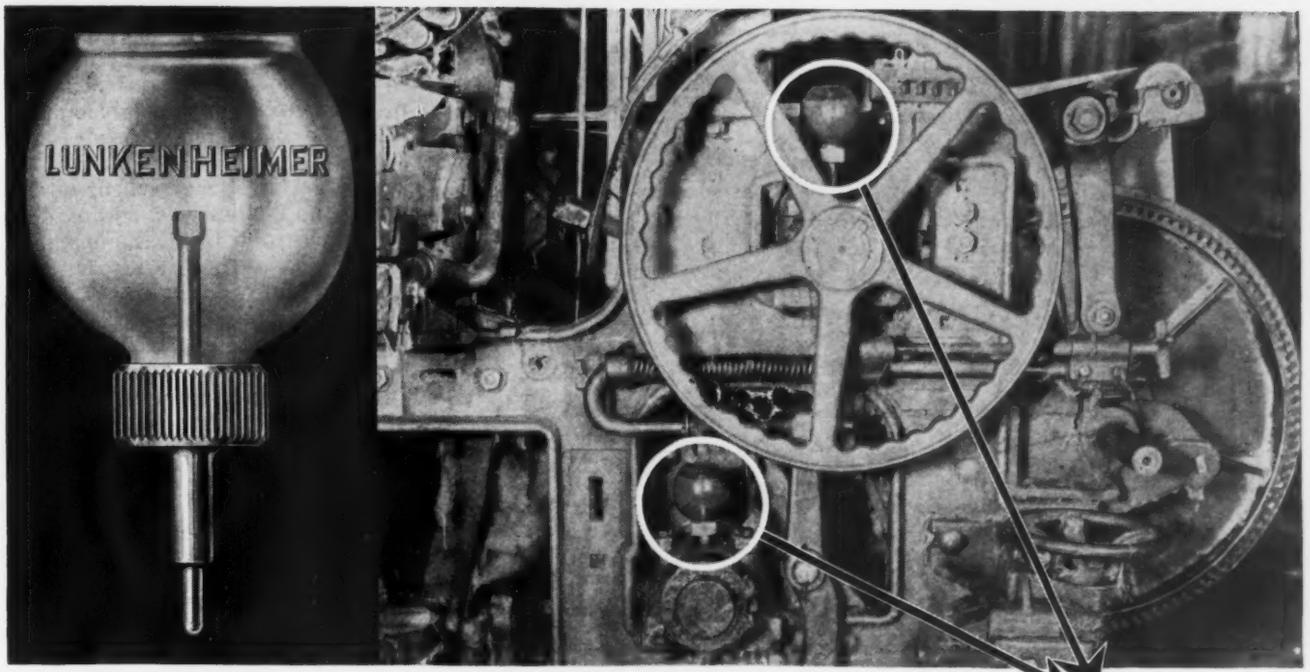


Fig. 1815
BOTTLE OILER
Globe Body
Fully automatic. Insures efficient, uniform, economical lubrication of bearing. Feeds oil only when shaft is in motion.

Typical use of Lunkenheimer Bottle Oilers in large textile mill.

LUNKENHEIMER *Visible* BOTTLE OILERS

Save Time, Labor and Oil... Lubricate ALL Bearings Dependably

Leading textile mills everywhere are turning to Lunkenheimer Visible Bottle Oilers for better, more dependable, more economical and trouble-free lubrication of looms and card machines.

Lunkenheimer Oilers are fully automatic in operation. They feed the right amount of oil, in the right way, at the right time, to the right place. Oil wastage, hazards created by oil spilled on floors, and loss of time incident to frequent hand oiling are eliminated.

With Lunkenheimer Bottle Oilers, the overseer can know immediately if the loom or card machine is being lubricated, which is impossible where the oiling device is hidden from view.

Lunkenheimer Bottle Oilers improve plant production, lower machinery and repair costs, reduce power consumption, eliminate waste of lubricant, lessen fire and accident hazards, and require but a minimum of inspection and supervision.

See your nearest Lunkenheimer Distributor, or write.

THE LUNKENHEIMER CO., Cincinnati 14, Ohio, U. S. A.

New York 13, Chicago 6, Boston 10, Philadelphia 7.
Export Department: 319-322 Hudson St., NewYork 13, N. Y.

YOUR LUNKENHEIMER DISTRIBUTOR

Lunkenheimer Distributors are located in the principal industrial centers. There is one near you fully equipped to assist with your maintenance and operation problems. Call on him.

Fig. 1816
BOTTLE OILER
Flat Side Body
For use where space does not permit installation of Globe Body Oiler. All operating features same as in Fig. 1815.

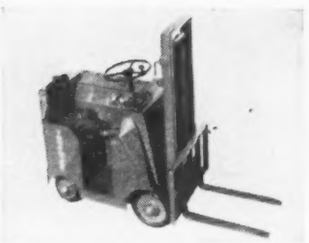
LUNKENHEIMER VALVES

BRONZE, IRON, STEEL AND CORROSION RESISTANT ALLOY VALVES, 125 TO 2500 LB. S. P.;
BOILER MOUNTINGS, LUBRICATING DEVICES, AIRCRAFT FITTINGS

Announcing . . .

The New TOWMOTOR LT-35 LIFT TRUCK

Compact and lightweight--makes it economically sound for every industry, regardless of size, to enjoy the advantages of modern, mechanized materials handling.

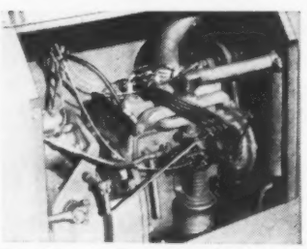


Unique design provides plenty of clear, accessible space for the operator while retaining small overall dimensions and low center of gravity for maximum stability.

The new Towmotor LT-35 Lift Truck can lift, carry and stack 1500 to 2000 pound loads with ease, yet it is so compact and lightweight that it may, with utmost safety, be operated under full load on freight elevators of limited capacity, on upper floor levels where low load limits are imposed, or directly into motor trucks.

Because of its size and ability to operate in confined areas, the LT-35 makes it economically sound to provide mechanical handling on jobs where manual handling, with its excessive labor costs, was formerly the only available method. The small, agile LT-35 can save time, money and manpower on your operation by taking over countless handling tasks, accomplishing them in less time, with far less effort and at lower cost.

The new LT-35 is the smallest of the complete line of Towmotor Lift Trucks and Tractors, each a product of the experience and "know-how" that Towmotor has gained in solving handling problems in every industry. Send for your copy of the Towmotor Lift Truck ANALYSIS GUIDE today. Towmotor Corporation, 1217 East 152nd Street, Cleveland 10, Ohio.



Engine and transmission in the LT-35 are easily accessible for inspection, adjustment and maintenance.

12 ★ FEATURES

★ COMPACT
★ LOW STEP UP TO OPERATOR'S STATION
★ LIGHTWEIGHT
★ RUGGED CONSTRUCTION
★ MANEUVERABLE
★ 4-WHEEL STABILITY
★ AMPLE SPACE FOR OPERATOR
★ EASY REACH CONTROLS
★ HYDRAULIC LIFTING AND TILTING MECHANISMS
★ MAXIMUM ACCESSIBILITY FOR INSPECTION AND MAINTENANCE
★ SHORT TURNING RADIUS
★ ENGINEERED TO THE JOB BY TOWMOTOR

TAKE IT UP WITH

TOWMOTOR

THE ONE-MAN-GANG

glare. Its color also blended well with the appearance of our Capri-blue upper side walls and turquoise dados and machines.

However, the strong sunlight of one summer and the heavy window condensation of one winter in a well-humidified spinning room so affected the paint that we were again in a mess. After trying to wash the paint off, scrape it off, etc., the writer rubbed the palm of his hand over a pane of glass. My hand was rather dusty at the time. *Eureka!*

A fixer, two doffers, and two card hands were given step ladders, handfuls of thread waste, and facial masks and told to go to work. After a total of 80 man-hours had been expended, our annual spring window cleaning was done. There were 146 openings, each consisting of forty-two 14x18-in. panes of glass.

This cleaning crew was followed by a man with a spray gun who sprayed on, evenly, 12 gal. of the doctored-up paint in 72 hr.

The results were: A spring cleaning and painting of all windows with a pleasing, non-glare paint to last one year. The cost, if calculated at $1.00 per hr. for labor, was: material (12 gal.), $33.00; cleaning labor, $80.00; painting labor, $72.00; total, $185.00; or cost per pane of glass, $3.01¢. *(R-275)*

Synthetic Fiber Table Is Convenient and Useful

We find the tabulation of the detailed information [TEXTILE WORLD'S Synthetic Fiber Table] very useful, both for comparisons and for general information. By using this table, it is immeasurably easier to obtain specific data with the minimum waste of time than if the same information had been contained in an ordinary continuous text. *(R-276) N. O. Howard.*

Handling the Veteran Requires Only Foremanship

Much is being said at this time about placing and working the returning soldier. Personally, I find the problem very simple. I simply assign him to his job, the one he left if possible, and have a short conversation with him before leaving him.

I tell him how proud I am of his war record, how glad I was to take on my bit of extra work here while he took Saipan or Manila, and then discuss anything about the job that I think he should know. If any changes have been made since he left, I am careful to point them out and explain them. Finally, I request that he go to his immediate superior or come to me if he

If You're Dyed Properly You're Never Dead!

the secret of fine dyes

SOLVAY SODIUM NITRITE

FABRICS THAT ARE BEAUTIFULLY DESIGNED and dyed always invite sales. Only quality dyes and dyeing can produce lustrous, colorfast products. In making quality dyes you can confidently rely on SOLVAY Sodium Nitrite. This SOLVAY product stands in a class by itself. Its fine, U.S.P. Grade crystals tend to remain free flowing . . . are of the high quality and purity best suited for the manufacture of azo dyes . . . and for getting perfect results in fine textile dyeing.

. . . BE SURE TO specify SOLVAY Sodium Nitrite . . . and you can always be sure of quality.

SOLVAY SALES CORPORATION

Alkalies and Chemical Products Manufactured by The Solvay Process Company

40 Rector Street **New York 6, N. Y.**

BRANCH SALES OFFICES:

Boston • Charlotte • Chicago • Cincinnati • Cleveland
Detroit • Houston • New Orleans • New York • Philadelphia
Pittsburgh • St. Louis • Syracuse

specify Quality . . . specify SOLVAY

When You Want a shipment to go the fastest way, the word "rush" is not enough. Specify "Air Express" and be sure.

Phone For Pick-Up as soon as package is ready. Special delivery at other end often means same-day delivery between many airport towns and cities as far as 1,000 miles apart.

Air Express goes everywhere. In addition to 375 airport towns and cities, it goes by rapid air-rail schedules to 23,000 other communities in this country. Service direct by air to and from scores of foreign countries in the world's best planes, giving the world's best service.

RATES CUT 22% SINCE 1943 (U. S. A.)					
AIR MILES	2 lbs.	5 lbs.	25 lbs.	40 lbs.	Over 40 lbs. Cents per lb.
149	$1.00	$1.00	$1.00	$1.23	3.07c
349	1.02	1.18	2.30	3.68	9.21c
549	1.07	1.42	3.84	6.14	15.35c
1049	1.17	1.98	7.68	12.28	30.70c
2349	1.45	3.53	17.65	28.24	70.61c
Over 2350	1.47	3.68	18.42	29.47	73.68c
INTERNATIONAL RATES ALSO REDUCED					

Write Today for the Time and Rate Schedule on Air Express. It contains illuminating facts to help you solve many a shipping problem. Air Express Division, Railway Express Agency, 230 Park Avenue, New York 17, N. Y. Or ask for it at any Airline or Railway Express office.

AIR EXPRESS

GETS THERE FIRST

Phone AIR EXPRESS DIVISION, RAILWAY EXPRESS AGENCY
Representing the AIRLINES of the United States

needs information or advice on any phase of the job.

I keep a close watch over him and his work until I am convinced that he is at ease. One iron-clad rule I've set for myself and for everybody under me who has anything to do with handling a war veteran is: Don't baby him! The Army didn't show him any special considerations, and he does not want you to do so. *(R-281)*

Check This List To Reduce Waste

Carelessness is costly and every year exerts its toll in plants throughout the nation. Everyone knows that the chief reason a big mill cannot operate as efficiently as a small mill is the greater percentage of waste in every category. A periodic check of carelessness about the mill will produce some favorable results. In our plant, we make a point of impressing all the items on the following list upon supervisors and workers.

Turn out all lights when finished with them.

Do not leave empty cartons lying around.

Turn off water valves.

See that all doors are locked when scheduled to be locked.

Report frayed electric wiring immediately upon finding.

Keep supply-room doors locked.

Check supply stocks regularly.

Repaint bare spots when found.

Check guards on and around machinery and equipment.

See that all trash piles are cleaned up.

Check electric wiring for possible short circuits.

Check belting and shafting for secure hangers.

Inspect floors for spots needing repair.

Check light globes; replace burned-out lights.

Inspect window sash, door jambs, etc.

Check stairs and steps regularly.

Observe all maintenance signs.

Thoroughly investigate accidents in your department.

Inspect the roof.

Check cleaning supplies and equipment.

Study job methods and procedures for possible improvements.

Keep all equipment clean.

Check air-conditioning and ventilating systems.

Make certain all drains are clear.

Be on the lookout for fire hazards.

Make certain that every employee is being used on the job for which he or she is best fitted.

Check lighting of all work areas. *(R-279)*

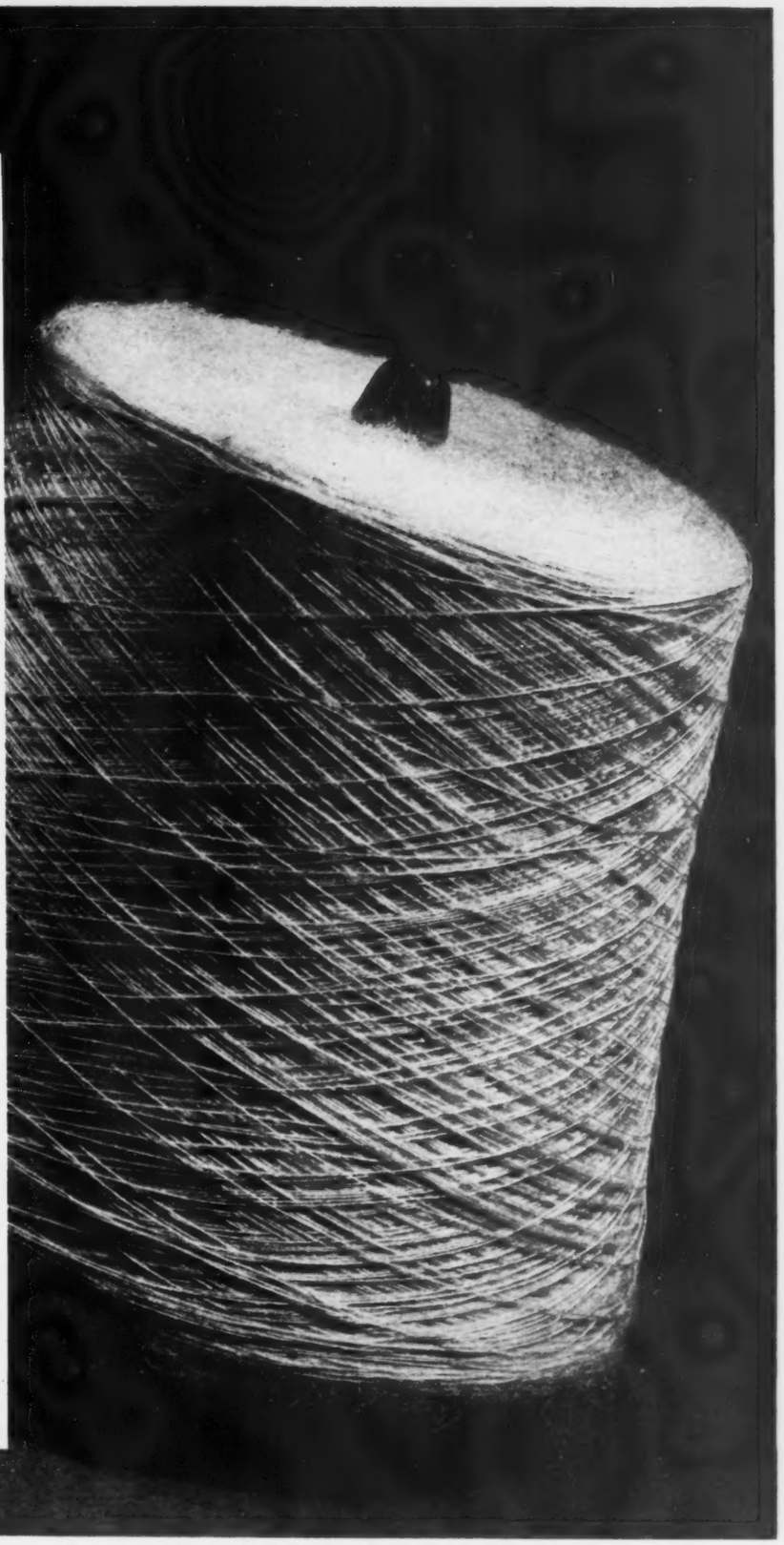
(AN ACTUAL CASE FROM THE FILES OF MEINHARD, GREEFF & CO., INC.)

Several years ago a large worsted yarn mill decided to extricate itself from the financial control of a group who also controlled its distribution. Its directors believed that the functions of selling and financing should be separated, but they were faced with extending long terms of credit to a trade where a careful selection of credit risk was needed. Moreover, they required large scale financing.

They consulted Meinhard, Greeff – first, because of their keen knowledge of the mill's customers whose credit they would guarantee; and secondly, because of their large financial resources.

With the certainty of obtaining ample working capital, and with credit worries eliminated, this manufacturer has tripled his production and is now known as one of America's most important producers of worsted knitting and weaving yarn.

One more example of constructive cooperation between Meinhard and its clients . . . based upon common-sense, not iron-clad dictum.



Meinhard, Greeff & Co., Inc.

FACTORING FOUNDED ON SERVICE

51 MADISON AVE., NEW YORK CITY
ASHLAND 4-7885

Rayon Plants by

[No. 4 of a series of Kohorn Built Plants]

KOHORN

This Plant Constructed in 1929

1919

1924

TO SATISFY AN EVER INCREASING DEMAND FOR RAYON AND STAPLE FIBER CONSULT WITH OSCAR KOHORN & CO., LTD.

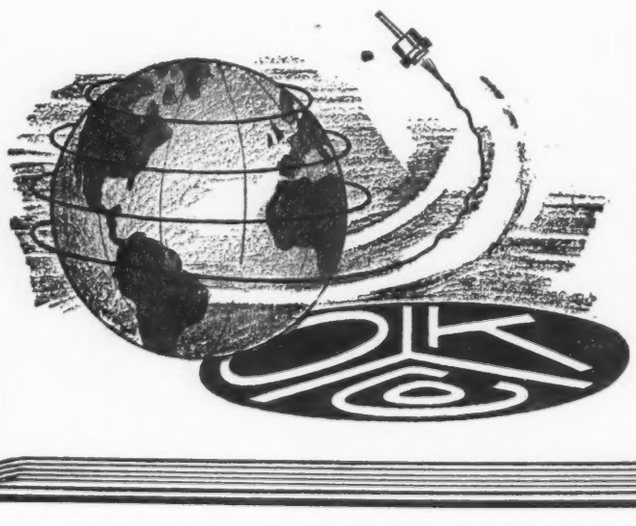
1935

If it's a new plant you need, we can design it, build it and put it in operation in eighteen months; if it's a plant expansion or modernization, we can handle the work in less time. With more than thirty years of experience in building rayon plants, all over the world, Oscar Kohorn & Co., Ltd., can guarantee you an up-to-date plant, most efficient production methods with quality yarns, in large volume, at low cost.

Inquiries welcomed

OSCAR KOHORN & CO., Ltd.
501 Fifth Ave. NEW YORK, N. Y.

1938



SERVICES RENDERED:

PLANT LOCATION:

(a) Survey on the ground to determine location, man-power, transportation, markets, raw material, power, fuel and water supplies.
(b) Determine size of initial plant, and plan its expansion.
(c) Consultation on types of yarn, denier, packaging, etc.
(d) Estimates for land and building, equipment, and working capital.
(e) Estimate production cost and overhead, sales and profit.

ERECTION OF BUILDINGS AND MACHINERY:

(a) Furnish complete plans for buildings and machinery.
(b) Supply all production machinery and auxiliary equipment.
(c) Send KOHORN engineers to erect plant, install machinery and building equipment.

STARTING PRODUCTION:

(a) KOHORN Chemists and Engineers, start the plant and bring it into full production.
(b) KOHORN experts help train local labor.
(c) Modern chemical and mechanical processes, installed by KOHORN, hold consumption of raw material and labor to a minimum.
(d) KOHORN engineers co-operate with your sales department in introducing product to the market.

PLANT EXPANSION

(a) KOHORN'S interest in your plant, after it is turned over to you, continues. Consultation always available.
(b) Our latest patents are put at your disposal when plant expansion is contemplated.

1945

MANUFACTURERS' BULLETINS

***READERS** may secure copies of literature reviewed on these pages by using the post cards below. Fill them out completely and drop them in the mail.*

Free FOR THE ASKING

1. **Water-repellent finishes** employing Zelan, are the subject of a 16-page booklet published by the Textile Service Section of DuPont.

2. **Stainless steel** for a wide variety of industrial uses is described in Electromet Review, a 4-page folder published by Electro Metallurgical Co. A stainless-steel fulling mill for processing woolen fabrics is described.

3. **Overhead materials handling** using Tramrail equipment is described in a booklet published by the Cleveland Crane & Engineering Co. Several sectional applications are listed and described.

4. **Pigments,** lakes, and toners are defined in June issue of Dyelines and Bylines, published by Calco Chemical Div., American Cyanamid Co.

5. **Celanese synthetics** for electrical applications is the subject of a booklet published by Celanese Plastics Corp. The booklet outlines various celanese synthetics, their characteristics, mechanical and electrical properties, and some of their electrical applications.

6. **Overhead crane conveyors** and the ways in which they may be used to increase capacity and efficiency of floor space in manufacturing operations, stock rooms, and packing and shipping departments, is the subject of a pamphlet published by Lamson Corp.

7. **Goggle-cleaning cabinets** for installation in mills, factories, and wherever goggles are used, are described in Bulletin No. CE-28 of the Mine Safety Appliances Co.

8. **Split-race ball bearings,** roller bearings and thrust bearings, in standard types, and also special constructions to meet unusual design or engineering requirements, are described in Catalog No. 84, published by Split Ball Bearing Corp.

9. **Automatic lubricators** featuring constant level feeds, are illustrated in a 4-page folder published by Acro Metal Stamping Co.

10. **Five DDT products,** each for a special purpose, and instructions for their uses, are described in a 6-page leaflet published by Pennsylvania Salt Manufacturing Co.

11. **Nickel alloy metals** in a wide variety of industrial applications are shown in Vol. 17, No. 2, of Nickel Cast Iron News, published by International Nickel Co. Also shown are examples of methods used to obtain machinable welds in cast iron by using nickel welding rods.

12. **Custom-made labels** for every type of business, and every department in it, are illustrated in a 32-page catalog published by Eveready Label Corp.

13. **Quimby Rotex pumps,** which are rotary type, positive-displacement pumps for moderate, or low-viscosity liquids under medium pressures, are described in a new bulletin published by Quimby Pump Co. Specifications, dimensions and performance charts are given.

14. **Fans for dust control,** fume exhaust, and materials handling are described in Catalog No. 430-3 published by B. F. Sturtevant Co. Specifications and performance tables for various applications and speeds are given.

15. **Corrosion-resistant alloys** are described in a new manual of technical data published by the Copper Alloy Foundry Co. The manual contains information on mechanical and physical properties, chemical analysis ranges, and corrosion-resistance of stainless steel, nickel, monel, carbon and alloy steels, and other alloys.

16. **Mercerizing** and instructions for the recovery of caustic soda in mercerizing when using Alkamerce in the process are described in a 12-page booklet published by the Hart Products Corp. Seven important factors in mercerizing from tank of caustic soda solution to drying operation, are covered.

17. **The rebuilding of machine parts** by metallizing, is the subject of Vol. 3, No. 8 of Metco News published by Metallizing Engineering Co., Inc.

18. **Lists of approved equipment** to be used as a guide in the selection of fire protection appliances and certain other types of apparatus which have a direct bearing on fire hazards is contained in Bulletin No. 90.00 issued by Factory Mutual Laboratories.

19. **Metallic stearates,** and their uses in industry, are described in a booklet published by Witco Chemical Co.

20. **Thermostatic switches and pressure switches** designed for a wide variety of industrial applications are illustrated in a new catalog published by United Electric Controls Co.

21. **Finishes for cotton,** spun rayon, filament rayon and rayon blends, including dyeing, crease-resistant finishes, stabilized finishes and shrunk finishes are described in a booklet published by Bradford Dyeing Association.

22. **Stub screw machine drills,** in sizes from No. 1 wire gage to No. 16 wire gage, and from 1/16 in. to 2 in. are cataloged in a

Instructions for use of post cards on other side

Write in box number of item describing one catalog wanted. ☐
Coupon void if not filled out completely

My Name .....
Title .....
Mill .....
Street .....
City ..... State .....
TEXTILE WORLD, New York 18, N. Y. (June, 1946)

Write in box number of item describing one catalog wanted. ☐
Coupon void if not filled out completely

My Name .....
Title .....
Mill .....
Street .....
City ..... State .....
TEXTILE WORLD, New York 18, N. Y. (June, 1946)

Write in box number of item describing one catalog wanted. ☐
Coupon void if not filled out completely

My Name .....
Title .....
Mill .....
Street .....
City ..... State .....
TEXTILE WORLD, New York 18, N. Y. (June, 1946)

Write in box number of item describing one catalog wanted. ☐
Coupon void if not filled out completely

My Name .....
Title .....
Mill .....
Street .....
City ..... State .....
TEXTILE WORLD, New York 18, N. Y. (June, 1946)

Postage Will be Paid by McGraw-Hill Pub. Co.

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD
First Class Permit No. 64, Sec. 510, P. L. & R., New York, N. Y.

4c Postage Will Be Paid By—

TEXTILE WORLD
330 West 42nd St.
New York, 18, N. Y.

McGraw-Hill
Publishing Co., Inc.

6-page leaflet published by Chicago-Latrobe Twist Drill Works.

23. Belting for elevator, conveyor and power transmission is described in a catalog published by Hewitt-Robbins, Inc. Maintenance suggestions advise users how to prolong life of belts and avoid costly production delays.

24. Official wool grade standards and moisture regains are listed in a book published by United States Testing Co., Inc. Also included in the book are charts, tables, and drafts for general textile use, and illustrations of laboratory test procedures, equipment, and standards.

25. Electric welding small parts of 0.0005 in. through 0.125 in dia., is discussed and illustrated in a 4-page folder published by Teezer Weld Corp.

26 Complete plastic facilities, including research, development, design, engineering, mold making, manufacturing, compression molding, laminating, and low-pressure molding, performed by Plastics Division of General Electric Co. are described in a 20-page brochure just issued.

27. Koroseal, its properties, physical aspects and industrial applications, are graphically pictured and described in an 18-page booklet published by B. F. Goodrich Co.

28. Electronic potentiometer pyrometers incorporated into recorders, controllers and signal apparatus are described in Bulletin 232, published by Bailey Meter Co.

29. Boiler water level control is discussed, and description of a working installation is given in Bulletin 451, issued by Northern Equipment Co.

30. Decorative surfacing materials are illustrated and described in a color folder issued by Plastics Division of General Electric Co. Listed also are the advantages, recommended uses, properties, grades and sizes of the materials.

31. Roller bearings for all types of industrial machinery are illustrated in an 8-page folder published by Hyatt Bearings Div., General Motors Corp. Applications of bearings to pumps, hoists, engines, and stokers are shown.

32. Tractor excavator, featuring Diesel power, unit construction, improved balance and stability, and 1 cubic yard capacity is pictured and described in a 4-page leaflet published by Trackson Co. Complete specifications and list of available extra equipment are given.

33 Pipe braces for bracing pipes against sway or thermal movement are illustrated in a pamphlet published by Grinnel Co., Inc. The braces described feature a springloaded element for absorbing thrust.

34. Roving processes are analyzed, and several new roving processes are described in a bulletin published by Platt Bros. & Co. Ltd. Subjects covered include: safety and waste prevention at the card, weighting comber rollers, one-process roving, twist contraction in spinning, and fiber control in high drafting.

35. Fiber bonded processes, in which plastics and other bonding agents are applied to slivers, rovings, yarns, or fabrics to produce coated materials, are described in a booklet published by Riverside & Dan River Cotton Mills, Inc. Included are examples of uses to which such products have been put.

36. Chemical cleaner for metals, for use in such operations as removing boiler scale, general pickling operations, cleaning of heat transfer equipment, and stripping of zinc plate, is described in a pamphlet issued by Special Chemicals Div., of Pennsylvania Salt Mfg. Co.

37. Overhead traveling cleaners, and overhead materials handling equipment for textile mills are discussed in a booklet issued by American Monorail Co.

38. Air systems used for drying in textile finishing operations, are described in a 4-page folder published by J. O. Ross Engineering Corp. Applications of many types of drying equipment are listed and illustrated.

39. Electric bonding machine for seaming thermoplastic substances is described and pictured in a booklet issued by Singer Sewing Machine Co.

40. Protective coating for concrete, steel, floors, pipes, tanks, and machinery, including illustrations of how the material protects such substances from acids, alkalis, oil and water, is the subject of a bulletin published by Prufcoat Laboratories, Inc.

41. Fire protection for hazards involving oils and other flammable liquids is the subject of a booklet published by Grinnel Co., Inc.

42. Zinc oxide and its function in high-grade outside paints are discussed further in the current issue of *Paint Progress*, published by The New Jersey Zinc Co. The advantages to the user of paints containing zinc-oxide pigments are pointed out.

43. Protective clothing for use by firemen, workers who handle chemicals, laboratory technicians, etc. is described in a ten-page catalog section issued by The B. F. Goodrich Co. A variety of clothing items are described and illustrated.

44. Preventing leakage along the drive shaft of centrifugal pumps is discussed in a two-color, 16-page bulletin issued by Ingersoll-Rand Co. Several pictures of installations illustrate the use of the company's shaft-seal product.

45. Continuous pH controllers and recorders are described in detail in a bulletin recently announced by The Bristol Co. The bulletin includes engineering and technical information relative to pH theory and measurement, and gives illustrations of actual installations.

TO GET MORE INFORMATION

1. Fill out completely *one space* (name, title, company, address and item number) for each *bulletin* wanted. Put only one number in each square.

2. Use bottom card only if ordering one to four pieces, both cards if ordering five to eight.

3. Detach and mail. No postage required.

Write in box number of item describing one catalog wanted. 14
Coupon void if not filled out completely

My Name ... William L. Wilson
Title ... Overseer
Mill ... Clearview Mills, Inc.
Street ... 1430 So. Main St.
City ... Clearview ... State N. C.
TEXTILE WORLD, New York 18, N. Y. (June, 1946)

Postage Will be Paid by McGraw-Hill Pub. Co.

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD
First Class Permit No. 64, Sec. 510, P. L. & R., New York, N. Y.

4c Postage Will Be Paid By—

TEXTILE WORLD
330 West 42nd St.
New York, 18, N. Y.

McGraw-Hill
Publishing Co., Inc.

Write in box number of item describing one catalog wanted. ☐
Coupon void if not filled out completely

My Name .....
Title .....
Mill .....
Street .....
City ..... State .....
TEXTILE WORLD, New York 18, N. Y. (June, 1946)

Write in box number of item describing one catalog wanted. ☐
Coupon void if not filled out completely

My Name .....
Title .....
Mill .....
Street .....
City ..... State .....
TEXTILE WORLD, New York 18, N. Y. (June, 1946)

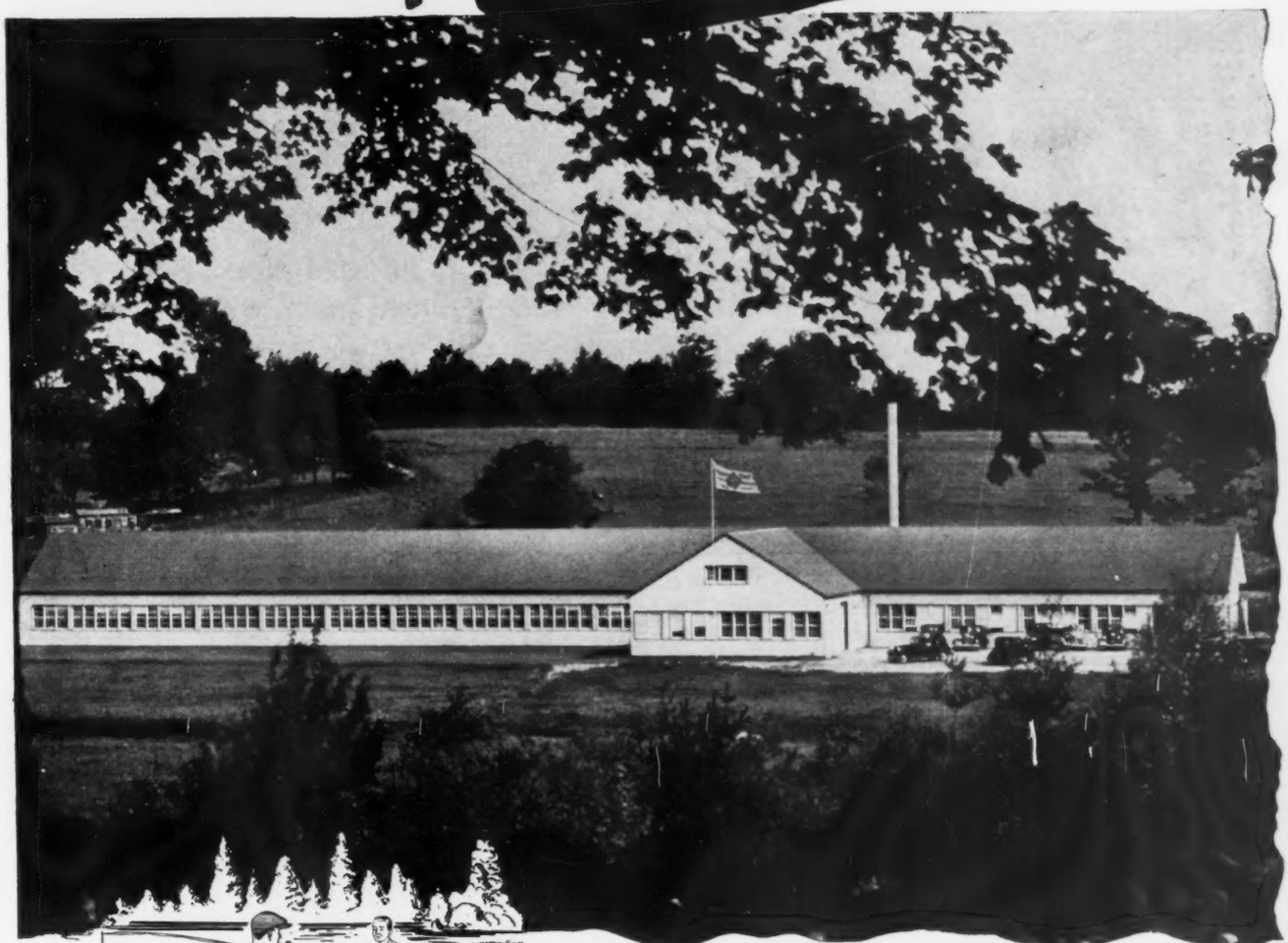
Write in box number of item describing one catalog wanted. ☐
Coupon void if not filled out completely

My Name .....
Title .....
Mill .....
Street .....
City ..... State .....
TEXTILE WORLD, New York 18, N. Y. (June, 1946)

Write in box number of item describing one catalog wanted. ☐
Coupon void if not filled out completely

My Name .....
Title .....
Mill .....
Street .....
City ..... State .....
TEXTILE WORLD, New York 18, N. Y. (June, 1946)

Superb Living Conditions Mean Dependable Personnel

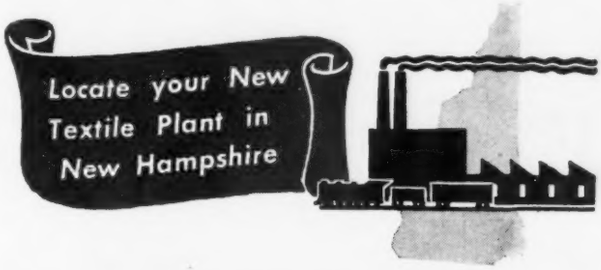


Home-owning New Hampshire people take naturally to industrial occupations.

LOCATE your Textile Plant in New Hampshire. Where people live well in pleasant, uncrowded surroundings, they work well. Accustomed to industrial work through many generations, home-owning New Hampshire people take naturally to special skills — they are unusually adaptable.

Low power rates and excellent transportation add important reasons for industrial location in New Hampshire. Splendid highways kept open the year around help industry to keep humming every working day in the year.

***Write** for booklet, just printed, "A Plant In New Hampshire." Address Edward Ellingwood, Industrial Director, 95 State Office Building.*



NEW HAMPSHIRE

State Planning and Development Commission

CONCORD, New Hampshire

OUT OUR WAY

I'M SURPRISED AT A GUY OF HIS MENTAL CALIBER DOIN' EXACTLY AS I WOULDA UNDER TH' CIRCUMSTANCES! HE GRABBED TH' ELECTRIC LIGHT, TH' TYPEWRITER AN' TH' TELEPHONE WHEN HE FELL, AN' PULLED THEM ALL DOWN WITH HIM!
MAYBE TH' OFFICE NEEDS SOL-SPEEDI-DRI JUST LIKE TH' REST OF TH' PLANT! A BROKEN NECK ISN'T ANY DIFFERENT IN THERE THAN OUT HERE!
J.R.WILLIAMS
THE FALL GUY
COPR. 1945 BY NEA SERVICE, INC. T. M. REG. U. S. PAT. OFF.

SOL-SPEEDI-DRI saves time, man-hours, and money in keeping floors clean, dry, and skid-proof . . . one plant took fourteen men off floor-maintenance and put them on more valuable work, when they started using SOL-SPEEDI-DRI. It's a dry, white, granular material that sucks-up oil just as a blotter takes up ink.

Leading insurance companies recommend it because it cuts down on falls, accidents, and "flash" fires caused by oily, greasy floors.

Thousands of industrial plants spread SOL-SPEEDI-DRI on oily or greasy floors. It immediately furnishes a non-slippery, light-colored surface. When the oil is absorbed, you sweep up the SOL-SPEEDI-DRI with a stiff broom, and the floor is dry and *safe*.

No gangs of trained workmen are needed, no complicated expensive machines, no dangerous or inflammable chemicals or caustics.

Write us today for further information, and a big, free sample. Just attach your business card to this advertisement.

SUPPLIERS: *East* — Safety & Maintenance Co., Inc., New York 1, N. Y.
South, Midwest & West Coast — Waverly Petroleum Products Co., Philadelphia 6, Pa.

SOL·SPEEDI·DRI
OIL AND GREASE ABSORBENT

Questions and Answers

Desizing Methods Vary For Acetate Gray Goods

Technical Editor:

There has never been available a material entirely satisfactory for sizing acetate warps, but gelatin seems to be the best thing on the market. What methods are normally employed today for desizing acetate gray goods? (9100)

High-grade glues and gelatins are used for sizing acetate rayon. Flat fabrics of high-count construction or those apt to show "break-marks" are desized in two ways. They may be padded through the enzyme solution and batched on a roll for several hours, after which they are carried to a jig, washed, scoured, sometimes bleached, and then dyed.

A variation of this process is to do the entire job on the jig; or in other words, put up the roll in the gray state and give it from four to six ends in the enzyme solution, along with a little wetting agent. After this stage, it goes through the processing just mentioned. The jig method of desizing is preferable to the padding and bleaching method, since it results in better uniformity. Lots which are padded through the enzyme solution and then allowed to stand are apt to cool off below the optimum desizing temperature, particularly at the selvages. This uneven temperature may result in uneven dyeing.

On filament-acetate fabrics, warm water of 100°F. to 130°F. is often used for removing the glue or gelatin size, especially when this operation is carried out on the jig. These sizing materials will swell and wash off; but in order to insure complete removal, the bath should be dropped once or twice, and the goods run for several ends in a fresh bath; otherwise some of the glue or gelatin may adhere to the fibers and give rise to mottled dyeing, especially in pastel shades. By the use of proteolytic enzymes, naturally more expensive than warm water alone, the destruction of the size is assured, which coupled with the fact that there is a possible

Caesar had a headache

When Caesar divided Gaul into three parts his worries had just begun. For Caesar had to institute a *civilized* monetary system to replace barbarian barter.

Luckily, today's problems of finance have an easy solution in factoring. For the factor acts as financier, market consultant and friend. He saves you credit loss, collection expense and accounting worry.

Opportunity knocks *more often* at the door of that business which has fluid operating capital.

Assure yourself that you will not be forced to forego opportunity when it is presented.

Your inquiry will receive a prompt and full explanation of the comprehensive services offered by

MILL FACTORS
CORPORATION
380 4th Ave., New York 10, N. Y.

Moving day coming up?
Here are some facts you leaders of industry will want to add to that memorandum. Whether yours is a parent plant or branch, Missouri offers these advantages:

- √ New State Constitution favors industry
- √ Low Taxes
- √ Over 950 new corporations last year
- √ Adequate water supply
- √ Abundance of skilled native labor
- √ Excellent transportation facilities
- √ Rich markets, retail and wholesale
- √ Wealth of natural resources
- √ Low cost power
- √ 350 communities eager to cooperate

Specialized, confidential service to industrialists. Write direct: Missouri State Department of Resources and Development, Department 708, Jefferson City, Missouri.

THE STATE OF MISSOURI
IN THE HEART OF AMERICA

saving of time, often makes it more desirable to use an enzyme.

Lighter-weight fabrics which are handled on reels or becks sometimes are not desized but are given a scour and wash before dyeing. Mixed fabrics containing acetate are sometimes boiled off in open width, then washed and dyed on a reel or a beck.

In the foregoing method, the cloth is picked up over a reel and dropped slack onto a conveyor where it lies in folds. The conveyor slowly carries it from the entering end of the machine to the delivery end, during which time the cloth is submerged in the boil-off bath. This bath usually contains a synthetic detergent, a little soap, or both, plus one of the complex phosphates. Desizing agents are seldom used when cloth is prepared in this manner.

Good Cotton Needed For Blending With Wool

Technical Editor:

We are experimenting with blends of cotton and cut wool top. Can you advise us as to the grade of cotton we should use and the kind and amount of lubricant we should spray on the blend for the best processing results? (9108)

The grade of cotton to use must be determined by the end product. In a 50-50 cotton and cut-wool-top blend, a good grade of cotton (probably better than Strict Middling) should be used. The wool top costs so much more than the cotton that too low a grade of cotton will tend to devaluate the high-priced wool.

The following points should be considered in the light of the requirements of the end product as to cleanliness and strength:

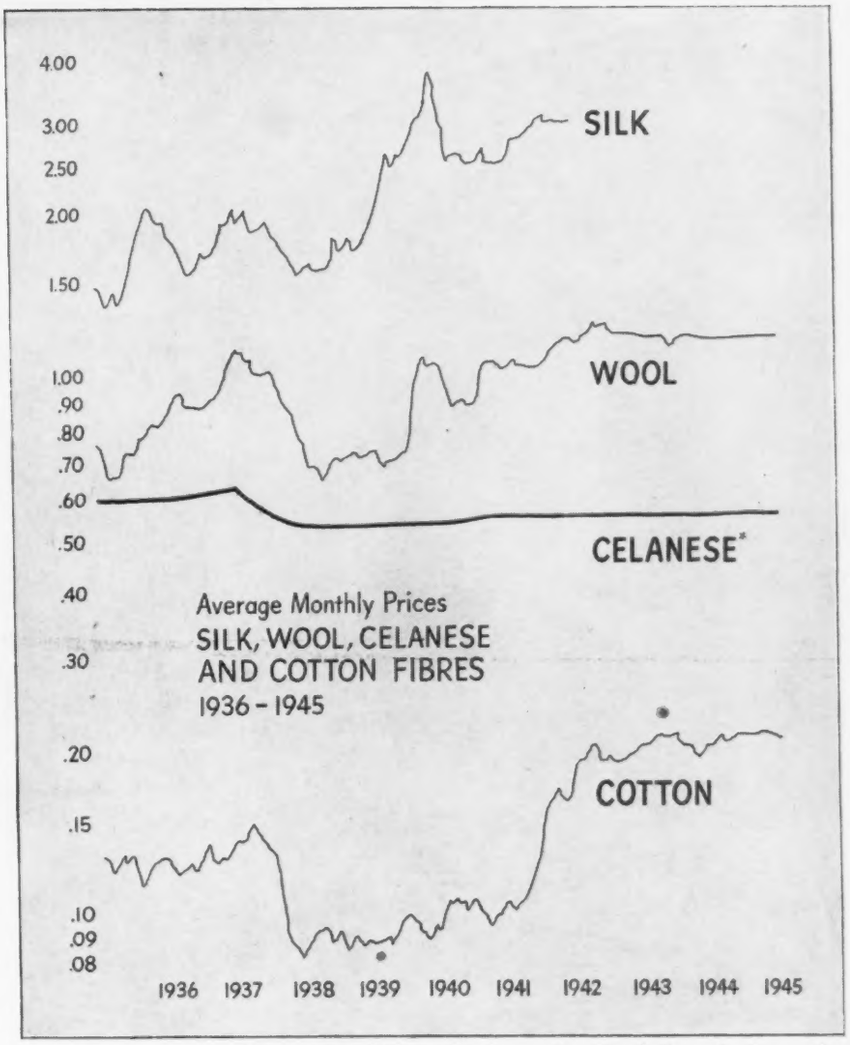
1. A clean grade of cotton should be used unless your opening and picking setup permits excellent cleaning, or unless you choose to double card your cotton.

2. A fairly long, fine staple should be used (something like 1⅛ in., or longer) if the yarn is to be woven, in which case strength will be important.

For such knit products as socks, moderately priced sweaters, gloves, ladies' tams, etc. where strength is not a requisite, it should be quite practicable to run 1-in. cotton. Unless the end product is to be of unusually low strength, you probably will not be able to come below 1-in. cotton because the major portion of the strength of the blended yarn will come from the cotton content.

The oil to use is problematical. It is customary to put from 0.1% to 0.5% of oil on cotton, but you very likely will need from 1.0% to 2.0% (and

Synthetics introduced the factor of known cost into the textile picture



Average prices of silk, wool and cotton from Textile Economics Bureau, Inc.

Not the least important of the many contributions of Celanese* synthetic yarns to the textile industry was the introduction of the *known cost factor* into the raw materials picture. Up until the development of the synthetic fibres, such as Celanese, the dexterity of the average textile mill operator in hedging against the prices of raw silk, wool and cotton was as great a factor in his profits as his own efficiency in manufacturing and selling.

He was faced with commodity prices subject to wide fluctuations—affected by crop conditions, the international situation or merely the psychological attitude of the market. Often it was necessary to carry costly inventories against shortages of raw materials or scarcities of particular grades.

Opposed to this, the synthetic fibres—unaffected by the whims of Nature and with quality precisely controlled—are a great stabilizing influence. Hedging is no longer necessary because with Celanese yarns, prices are free of undue fluctuation. The ten-year record shows remarkably little variation in Celanese yarn prices.

The synthetic yarns pioneered by Celanese Corporation of America have also been responsible for a long list of other textile advances—bringing once-deemed luxury goods within the reach of millions of people.

The field of synthetics is broad, indeed, with enormous adaptability for still wider benefits to industry and the public. Celanese operations in this modern field—including textiles, plastics and chemicals—are geared to this goal: constant improvement through research, broader service through improvement. Celanese Corporation of America, 180 Madison Avenue, New York 16, N. Y.

Copyright 1946, Celanese Corporation of America

Celanese*

*Reg. U. S. Pat. Off.

TEXTILES . . . PLASTICS . . . CHEMICALS

nearer 2.0%) of oil on your wool. The oil you are now using on cotton should be satisfactory for use on wool. If it spreads on cotton fibers, but because of the scaliness of the latter, it will take more oil. The right amount and even distribution of oil are important.

If you are not at present using oil on your cotton, the company from which you buy general mill oils can supply you. Practically all of the oil companies handle fiber lubricants.

However, keep a very close eye on the wool top as it arrives at the mill. The amount of oiling the top has already had before it reaches the mill will vary. Too much oil will cause lap-ups in the spinning room. If the amount present in the top when received is dangerous, you probably will be able to detect it by look, feel, or smell.

Look For Stability In Mothproofing Agent

Technical Editor:

We manufacture wool batts and would like to mothproof them. What is the best chemical to use for this purpose? (9111)

There are three materials generally used for mothproofing wool batts.

1. A fluoride of some kind can be used efficiently and at a relatively low cost. However, the value of the fluoride treatment is lost if the goods are washed or dry cleaned.

2. Among the most satisfactory materials now being used are those known by the tradenames Eulan and Mitin FF. These two materials have good affinity for wool, are colorless, and are fairly resistant to washing.

3. Though its use as a mothproofing agent is not as common yet as the materials already mentioned, DDT is now being used for this purpose.

Only Minor Changes To Set Picking Ball

Technical Editor:

What loom adjustments are necessary for setting the picking ball against the backwing cam so that the highest point of the cam will be parallel with the highest point of the picking ball?

Our looms are 72 in., 25 harness, 4x1 box, automatic intermediate worsted looms. (9113)

The following steps should be taken in setting the picking ball on this model loom:

Make certain that the picking ball is in the center of the slot of the bat wing. Set the shoe point slightly off the back center of the drive shaft. (This setting should be made in such a way that when you look straight down from the back

This Combination of Patents Brings You New Economy in Spinning and Twisting

Cutler Tape Patents and Riverside and Dan River Patents and Patent Applications.

Cutler *FIBER BONDED Tape

Mill men everywhere are well aware of the superiority of Cutler Spinning Tape as an aid to economical and dependable spinning and twisting. Now comes really GOOD news in the form of Cutler Fiber Bonded Tape—a brand new product resulting from a union of Fiber Bonded yarn or roving under the Riverside and Dan River patents and patent applications AND tape weaving under the Cutler Tape Patents.

This new tape has long life, excellent strength, good spindle grip, less than 0.4% stretch in warp, saves fifteen to thirty cents a spindle annually over standard tapes AND the initial cost is at least ten per cent less than that of standard mill tapes. Production is getting under way and we invite your inquiries.

*"Reg. U. S. Pat. Offices"

CUTLER TEXTILES *is now prepared to offer to the trade the following products (two already well known to the mill men of the United States and Canada) and several new products produced under the patents mentioned above:*

Exclusive Southern Agents for Cutler Fiber Bonded Products
W. D. DODENHOFF & CO.
Greenville, S. C.

•

Exclusive Southern Agents for Cutler Sak Tape
W. BYRD MILLER
Greenville, S. C.

•

Exclusive Northern and Export Agent for all Cutler Products:
CUTLER TEXTILES
Boston, Mass.

Cutler FIBER BONDED Tape · SAK Tape · EVERWEAR Temple Rolls · GRIPWEAR Temple Rolls · FIBER BONDED Bands, Ropes, Belts and Yarns

CUTLER TEXTILES

(ROGER W. CUTLER, President)
Boston, Massachusetts · Greenville, South Carolina

LOWELL

SHUTTLES

DOGWOOD OR
PERSIMMON—
FIBRE COVERED
OR PLAIN

BOBBINS

MAPLE, BIRCH
OR BEECH

A HALF CENTURY OF EXPERIENCE

Experience is the best teacher and this company has had half a century of it in manufacturing shuttles and bobbins for all fibres.

All wood for Lowell Products is well seasoned and kiln dried. Every operation is performed in our own shop to control quality and speed up deliveries. Any desired finish can be furnished. May we hear from you?

LOWELL SHUTTLE COMPANY

Established in 1896

15 TANNER STREET · · LOWELL, MASS., U.S.A.

of the loom you will see the picking-shoe point in a position almost on the center of the drive shaft). Adjust the stud in the picking-arm slot to the extreme outside, and pull the lug strap as far forward as possible.

When you have made these adjustments, turn the loom over. The picker stick should begin its stroke when the reed is 2⅝ in. from the fell of the cloth. The crankshaft arm should at that moment be on top center. If a stronger pick is needed, lower the power strap slightly; but do not force the pick by lowering the power strap too much. The strap should at all times be kept as nearly level with the picking arm as possible.

Of course, slight variations from these adjustments may need to be made to compensate for any peculiarities of the particular weave being used. Differences in loom speed, fabric construction, shed timing, etc., will require small changes in the settings which influence the pick timing.

No Drawing System Is Known as "Cracking"

Technical Editor:

We have heard that there is a system of drawing called "cracking." We do not know whether it is used in worsted, cotton, or spun-rayon processing. Can you give us any information about this process? (9106)

There is not a system of drawing called "cracking" in worsted, cotton, or spun-rayon processing. It is possible that some mill men call the break draft used on long-draft cotton spinning "cracking"; but if so, it is a local designation and has by no means been widely accepted in the textile industry.

Rolled Selvages Prevented by Reeding

Technical Editor:

We are having trouble with selvages rolling during the finishing process. Can you suggest some means for avoiding this condition? (9110)

There are a number of ways to avoid rolled selvages and a little study on the part of the designer who lays out the weave could possibly eliminate most of this trouble.

On fancy weaves, it is good practice to use the basket weave on the outside 24 to 40 threads—depending on the weave—to loosen up the threads running on the edge. This practice will generally permit the goods to go through the finishing processes without the selvages rolling.

When weaving goods that are to be

RAYON REPORTS

Prepared Monthly by American Viscose Corporation, New York, N. Y. JUNE, 1946

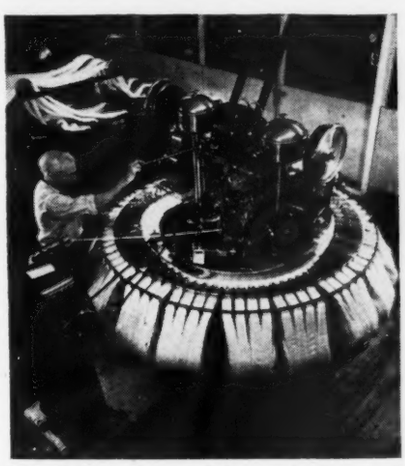
Textile Schoolmen To Attend Rayon Seminar at American Viscose

Some 40 faculty members from eight of the nation's top-flight textile schools will go back to school themselves during the week of June 3 to 8, at the Textile Research Department of the American Viscose Corporation in Marcus Hook, Pennsylvania.

The teachers will attend a forward-looking Seminar arranged to bring them abreast of the most recent developments in applied research on the manufacture and uses of rayon.

The project was first envisioned last fall when officials of American Viscose and its Educational Branch met with representatives of outstanding textile schools. It was decided that the educators should send certain of their faculty members to Marcus Hook to learn in detail about research and production procedures from the rayon manufacturer's own technicians. The Seminar will include courses on fabrics, cotton system spinning, worsted system spinning, woolen system spinning, weaving, knitting, dyeing and finishing. Progress in chemical research and the production and distribution of rayon will be discussed in lectures by outstanding leaders in the rayon industry.

A seven-can, stainless steel slasher for sizing warps, one of many full-size textile machines at AVC's Textile Research Department which will be studied at the seminar.



This Noble comb—one of the most intricate mechanisms of the industry—is another of the textile machines at AVC's Textile Research Department. It separates the short fibers (noils) from the normal length fibers and converts the longer ones into top.

G. I. BRIDES RECEIVE "CROWN" TESTED INDOCTRINATION

In response to a suggestion made by a former employee of American Viscose Corporation who is now on the staff of a service organization in England, a collection of dresses made in CROWN Tested fabrics has been supplied for use in fashion shows for the indoctrination of G.I. Brides. At the service organization's Recreation Center in Tidworth, England, young women about to embark for America have expressed keen interest in the assurance of textile serviceability afforded by the CROWN Tests.

RAYON . . . 20 YEARS AGO

Special research is being directed toward the problem of making rayon stockings "shower-proof" in view of their fast growing popularity.

Many silk throwsters—aware of rayon's growing importance—are beginning to advertise to the rayon trade their proficiency in handling the new fibers.

Salesmen for a progressive New England manufacturer are now offering brand new machinery developed especially for dyeing rayon in the skein.

MAKE USE OF 4-PLY SERVICE

1 PRODUCT RESEARCH
Helps you get the right yarn or fiber.

2 FABRIC DEVELOPMENT
Helps you design new fabrics.

3 TEXTILE RESEARCH
Helps solve production and finishing problems.

4 "CROWN*" TESTED
Helps provide scientific selling facts.

AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

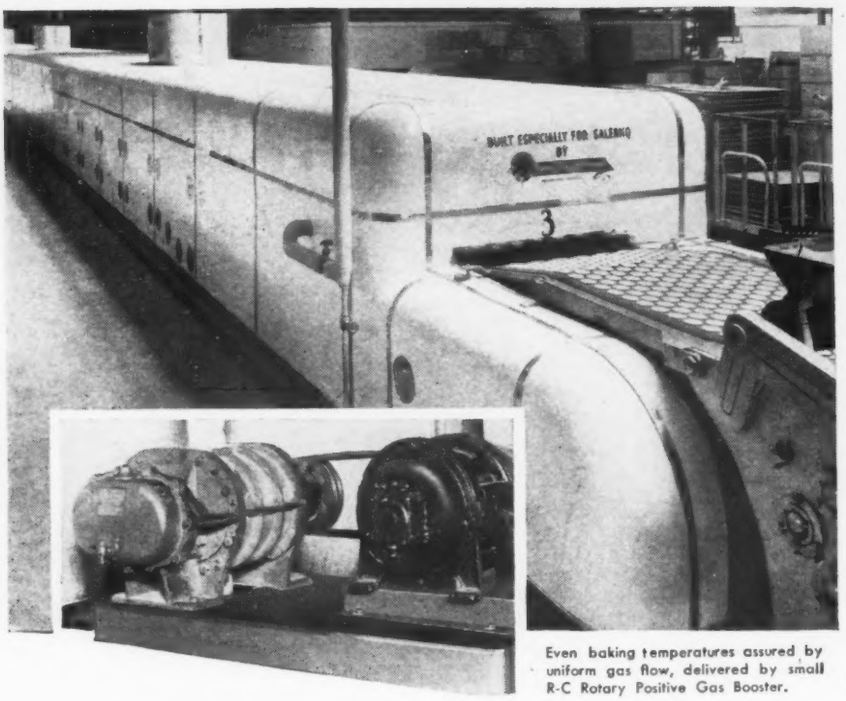
Offices: 350 Fifth Avenue, New York 1, N.Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.; Washington, D. C.; Wilmington, Del.

Plants at: Marcus Hook, Pa.; Roanoke, Va.; Lewistown, Pa.; Nitro, W. Va.; Parkersburg, W. Va.; Meadville, Pa.; Front Royal, Va.

CROWN TESTED RAYON FABRIC

*Reg. U. S. Pat. Off.

ADV.



Even baking temperatures assured by uniform gas flow, delivered by small R-C Rotary Positive Gas Booster.

COOKIES, CHEMICALS, OR CASTINGS..

they're all the same to

R-C *dual-ability*

ROTARY POSITIVE

No small valves, vanes or parts in the simple R-C Rotary Positive units—successfully used for almost a century of industrial progress.

CENTRIFUGAL

R-C Centrifugal Blowers offer an extensive choice of proved modern designs, where this type is better adapted to any specific application.

Uneven flow of fuel or air in industrial heating processes causes varying temperatures, inferior production quality. That's costly, whether you're processing foods, plastics, metals or textiles.

Roots-Connersville Rotary Positive Blowers and Gas Pumps have a long record of success in such applications. With only two moving parts, their simple, sturdy construction assures long-time, trouble-free performance.

Or, if Centrifugal Blowers or Exhausters meet your needs better, you'll enjoy similar full satisfaction from the advanced engineering built into this type of R-C units. We're unbiased in our recommendations because we build both types equally well. That's what we mean by R-C *dual-ability*.

We'll help you select standard R-C equipment of any capacity, or design special units to match your needs. Consult us without obligation.

ROOTS-CONNERSVILLE BLOWER CORP.

One of the Dresser Industries

606 Reed Ave., Connersville, Indiana

Roots CONNERSVILLE SINCE 1854

BOOSTERS & EXHAUSTERS

ROTARY POSITIVE AND CENTRIFUGAL BLOWERS • EXHAUSTERS • BOOSTERS
LIQUID AND VACUUM PUMPS • METERS • INERT GAS GENERATORS

fulled, it is wise to run the ends in the selvage three ends per dent for four or five dents. In addition to decreasing the likelihood of rolled selvages, this method of reeding also makes the selvages easier to handle by the tacker when he sews the edges together for fulling.

It is common practice in weaving for the weavers to run a few double ends on the edge of the warp to permit greater ease of weaving the selvages, which sometimes cause trouble through breaking because of chafing. If these double ends are placed in the warp the same as the rest of the yarn the selvages will be less likely to roll.

Two Woolen Cards Can Supply 720 Spindles

Technical Editor:

We have two Whitin 60-in. wool cards and four Whitin Model E wool-spinning frames of 120 spindles each. We use a Roto-Coner and wind our bobbins from the cones on a Schweiter automatic winder. At present, we have twelve C & K, W-3 automatic looms. We will install two more 120-spindle spinning frames and eight more automatic looms. Can you tell me approximately the usual efficiency of these spinning frames and whether or not two cards can handle the production necessary to keep them running? (9109)

The quality of the stock and the size of the yarn will have a definite bearing on the efficiency of the spinning frames. Using a fair grade of wool and a 2- or 3-run yarn, you should expect 85% to 90% efficiency.

According to the formula below, a spinning frame with a 1.25-in. diameter front roll turning at 100 r.p.m. and spinning 2-run woolen yarn at 100% efficiency would produce 0.204 lb. per hr. per spindle:

$$\frac{100 \times 1.25 \times 3.14 \times 60}{36 \times 1600 \times 2} = 0.204$$

With two more frames bringing your total spindles to 720, you could expect 147 lb. per hr. at 100% efficiency. At 85% efficiency, you would need 125 lb. per hr. from your two cards.

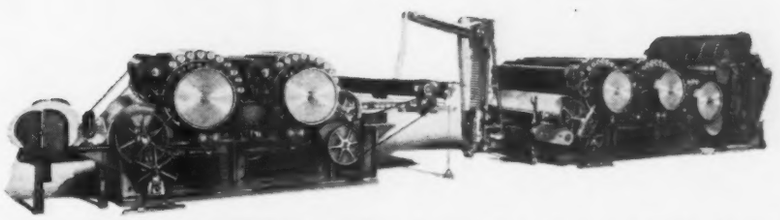
You probably could card this amount if your cards are in good shape. Some of the old-time New England woolen mills used to figure one set of cards would take care of twelve looms.

Figures following show the number of pounds of woolen yarn spun on a 120-spindle ring-spinning frame in a well-known mill.

Size of yarn (10 turns)	Lb. in 8 hr. (ring-spinning frame, 120 spindles)
1 run	386
2 run	193
3 run	128
4 run	96
5 run	77

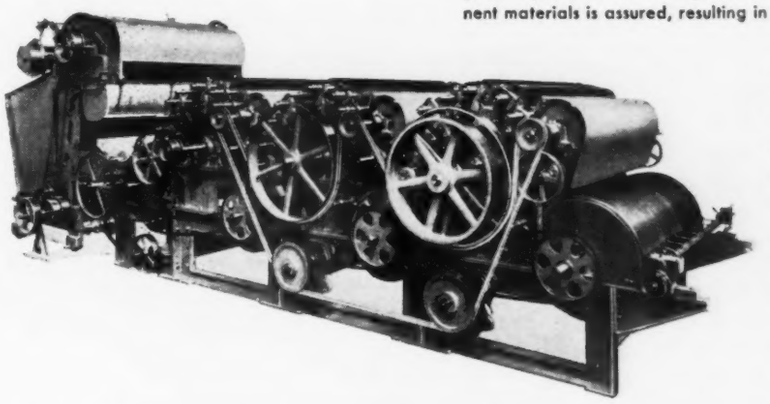
DESIGNED FOR *Your Individual Requirments*

PROCTOR GARNETTS



The DUPLEX GARNETT—*for hard twist worsted threads*

This is really two garnetts with an intermediate feed, which crosses the fibers for the finishing doffer so that more threads will be opened. Not only are fibers opened up much better than is usually possible but production is held at high levels. Output varies with stock, but ranges from 50 to 75 pounds per hour on average hard worsted thread wastes. More perfect blending of the component materials is assured, resulting in much better work, both in quality and appearance.



The 3-CYLINDER GARNETT *for medium twist cotton and rayon yarns and waste*

This Proctor 3-Cylinder 30" x 60" breast type garnett is extremely well suited to medium twist yarns and waste. The worker and stripper arrangement on this machine is very advantageous. Wiring and feeder can be varied to suit stock, while sectional construction permits addition of extra sections or splitting up and converting to a duplex arrangement.

Through the years, Proctor engineers have developed many types of garnetts, each type suited to individual product or output requirements. There are highly efficient Proctor garnetts for the handling of hard twist worsted threads, medium twist rayons, nylons, cottons and a wide variety of other fibers. Production figures run high, but vary, of course, with the type of fiber being garnetted. The metallic wire used in all Proctor garnett cylinders is processed in our own shops on machinery designed and built by our own staff of engineers and mechanics. Fineness of clothing and type of metallic wire used is varied to suit stock being worked. Proctor garnetts are built in sizes to meet individual production needs. Before investing in another single piece of garnetting equipment, let Proctor engineers consider your problem and recommend machinery to fill your requirements.

PROCTOR & SCHWARTZ • INC. P&S PHILADELPHIA 20 • PA.

DARNELL CASTERS
Maximum
FLOOR
PROTECTION
Precision-made Darnell Casters with the DOUBLE BALL-BEARING SWIVEL assure a long life of efficient, economical service
Free
MANUAL
A SAVING AT EVERY TURN
DARNELL CORP. LTD.
LONG BEACH 4 CALIFORNIA
60 WALKER ST. NEW YORK 13 N.Y.
36 N. CLINTON CHICAGO 6 ILL.

Yarn-Diameter Tester

(*Continued from page 121*)

Fig. 2 shows the relation of machine results with the diameters obtained by the Ashenhurst formula of $1 \div 0.92 \times \sqrt{N \times 840}$ for cotton yarns with optimum twist. Fig. 3 shows in graph form these same results.

TEST RESULTS. The circles on the graph indicate the machine results, and the crosses show the results from the formula. These curves indicate that Ashenhurst's formula is reasonably accurate for determining the diameters of cotton yarns from approximately 12s to 60s.

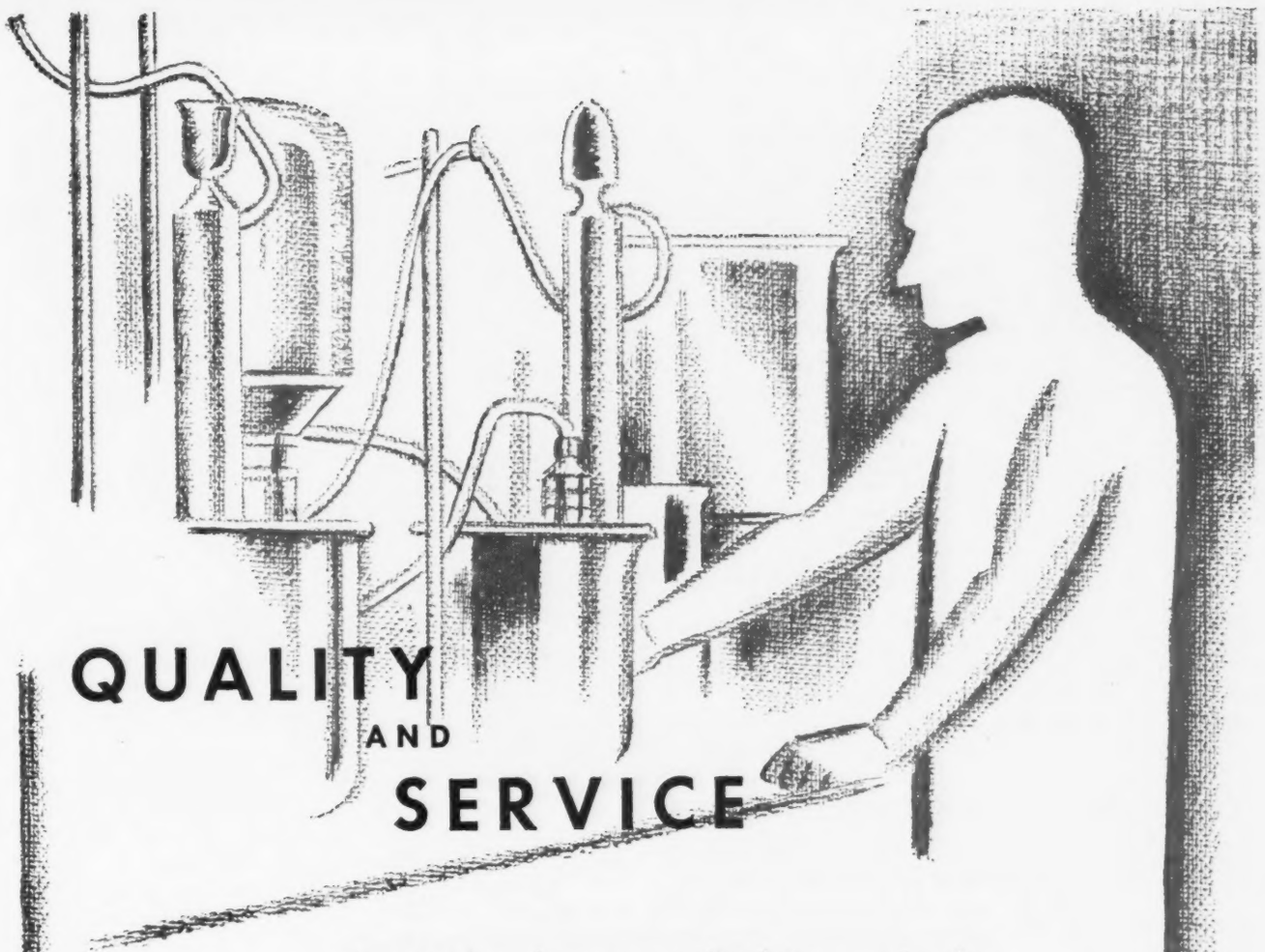
The difference between the diameter as determined by the machine and by the formula tends to increase at both ends of the yarn-number range. The diameter by formula is smaller for the coarse numbers and larger for the fine numbers. Machine results were obtained by running three samples of each yarn on the rod with a coil length of 5 in. The length of yarn used on the machine varied from approximately 6 yd. for coarse yarns to 24 yd. for fine yarns.

Each sample used in making the tests was weighed on an analytical balance for the determination of the actual yarn number.

The variability of the yarn may be seen from the comparison of the given yarn number with the actual yarn number of each sample. The diameter as determined by the Ashenhurst formula was obtained from the actual yarn number. In general, the yarn diameter followed very closely the change in the actual yarn number. Experience has shown that the actual yarn number may vary considerably from the average or given yarn count. The results indicate that the actual yarn number should be determined whenever one makes tests on yarn diameter.

Fig. 4 shows a comparison (similar to that in Fig. 2) of diameters for cotton yarns with soft twist. On a basis of approximately the same actual yarn numbers, soft-twist yarns have a slightly larger diameter. Fig. 5 shows the diameters of two-ply cotton yarns which, on a basis of this small sampling, tends to demonstrate that the Ashenhurst formula applies equally well for ply yarns as for singles.

This yarn-diameter machine seems useful as an accurate means for determining average yarn diameter. It will also give some indication of yarn variability when coiling is done for short lengths. Ashenhurst's formula appears to be reasonably accurate for medium counts of cotton yarns, provided the calculations are made on the actual yarn numbers.



QUALITY AND SERVICE

Rayonier brand names on dissolving wood pulps are recognized as the buyer's assurance of highest quality.

Believing that all products can be improved, Rayonier maintains a large central laboratory, staffed by experienced scientists who strive unceasingly to develop ever higher standards of quality.

Quality products and quality in customer service go hand-in-hand. We believe we can best serve our customers by collaborating with them on their individual problems. Our technical staff offers a quality service correlating research, development and control with the uses of our pulps.

RAYONIER
INCORPORATED

Sales and Executive Offices: 122 East 42nd Street, New York 17, N.Y.
Mills: Hoquiam, Port Angeles and Shelton, Wash., and Fernandina, Fla.

WACO *dead stop*

END POINT TITRATOR

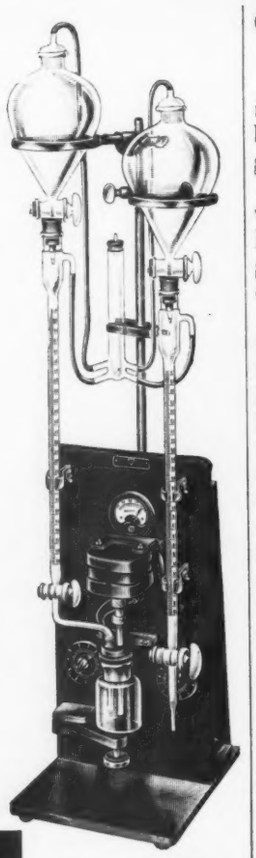
FOR MOISTURE DETERMINATIONS IN MINUTES . . . USING KARL FISCHER REAGENT

MOISTURE determinations are made in a few MINUTES using the WACO. The Karl Fischer Reagent method is a CHEMICAL technic for the determination of water content . . . eliminating oven drying!

The wide range of applications is indicated by the following partial list of users:

THE DOW CHEMICAL CO.
STANDARD OIL CO. (3)
E. I. DU PONT DE NEMOURS
LEVER BROS.
CANNON MILLS
PABST BREWING CO.
CROWN CAN COMPANY
SCHWEITZER PAPER CO.
HUBLINGER STARCH CO.
BRISTOL-MEYERS CO.
U. S. NAVAL POWDER
CHEMICAL SPECIALTIES
U. S. DEPARTMENT OF AGRIC.
PHOENIX CHEMICAL LAB.
McGILL UNIVERSITY
WASHINGTON UNIVERSITY
OHIO STATE UNIVERSITY
MICHIGAN STATE UNIVERSITY
NORTH CAROLINA STATE UNIVERSITY
MARIETTA COLLEGE
NUODEX PRODUCTS CO.

The WACO shows a sharp and reproducible end point . . . the needle of the microammeter sweeps across the entire scale. Technic is simple and electronic amplification is not necessary. It is a sturdy equipment embodying flexibility for use with many materials.



WILKENS-ANDERSON CO.
111 NORTH CANAL STREET • CHICAGO, ILLINOIS

Write for bibliography and Bulletin TW6 giving full details.

ANDREW K. HENRY

★

RAYON TOPMAKER

VISCOSE

ACETATE

RAYON NOILS

★

158 SUMMER STREET

BOSTON 10, MASS.

Carding and Combing

(*Continued from page 123*)

is indicated by (9)—to the conveyor belt (10) which carries the tow on to gilling.

Fig. 1 A and B show two transverse views of the machine in simplified form; Fig. 1 C shows addition of slots and guides to the cutting rollers to permit cutting of six tows at a time.

Other methods of tow to top conversion are being tried, but so far only this Courtaulds method has entered into general practice in Britain. It will have been observed that in this instance the production of staple fiber is by cutting. Breaking has been advocated in other quarters. Both cutting and breaking inflict damage, but the likelihood of introducing irregularity is much greater with breakage, and would be still greater with abrading, which has also been suggested.

The use, in this manner, of continuous filament for the purpose of producing staple sliver direct should effect considerable economy and, indeed, the saving has been put as high as 6½d (about 13c) per lb.

The standard weight of the packages of tow which feed the rollers is 400 lb. Once the tow in cut form has passed through the steel rollers the procedure follows the normal routine, although it is recommended that the sliver be passed through two stages of gilling.

The Greenfield tops which have been produced in increasing quantities since 1939 come within the following categories:

1 ¼ den.....	4 in. staple
1 ½ den.....	4 in. staple
4 ½ den.....	4 in. staple
8 den.....	8 in. staple

The references are to viscose in each case, but there seems to be no reason why other synthetic fibers should not be employed with equal success.

In the photographs (Fig. 2 and 3), it will be noted that the quality of the 4½-den., 4-in. staple Greenfield top is not equal to that of a fully combed staple top, but the difference is not sufficient to rule out use of the former. On the other hand, quality of the 8-den., 8-in. staple made from Greenfield top is superior to that of combed staple.

Although the cotton industry is the largest user of rayon staple, it has not so far concerned itself with the Greenfield method. However, the manager of one of Courtaulds' mills, who has been associated with Greenfield top development from the start, believes that cotton mills will ultimately comprise the largest market for the top, and that widespread use will be found in flax and silk spinning mills.

Principal use of the top to date has

SINCE 1847
HUNTER
BULLETIN 170
(Revised)
High Speed Uniflow Tenter Dryer
(Patents Pending)
For Woolens, Worsteds, Part Wools, Plushes and Felts
A New Pin Tentering Unit That Produces
More Yardage per Unit of Holding Capacity at Lower Steam, Labor and Power Costs
In 12 Lineal Feet for the Drying Chamber, It Dries
14-Ounce Worsteds at 25 Yards per Minute — 16-Ounce Woolens at 25 Yards per Minute
With One Man's Labor

This Brochure Tells You How TO TENTER FABRICS AT SPEEDS UP TO 90 YARDS PER MINUTE

We cordially invite you to write for the brochure pictured on this page. It will tell you in complete detail of an entirely new and radically different Cloth Tenter embodying a completely new conception of air drying cloth with improved handle at high productive capacities, and it will tell you for whom it has done these things.

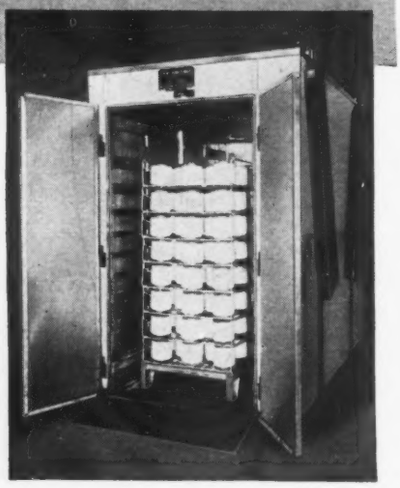
This new Hunter Uniflow Tenter affords drying times of 1.2 to 4 minutes depending upon the weight and construction of the fabric. Cloth is exposed to heat and air treatment but a fraction of the time usually required, with subsequent gain in handle and quality at high productive speeds.

This new unit is all metal and is operated by one man. It is equipped with every known device for automatic, continuous operation, such as Automatic Guides, Patented Selvedge Openers, Automatic Chain Oiler, Electronic Temperature and Humidity Controls, Recording Devices and Counters, Remote Control, Tachometer, Instrument Panel, etc. There is a size and type for any productive requirements.

A note from you on your letterhead will bring you this new 12-page informative brochure.

JAMES HUNTER MACHINE CO.
NORTH ADAMS, MASSACHUSETTS, U. S. A.
FOUNDED 1847

"H-W"
CONDITIONER



FOR REGAIN AND
TWIST SETTING OF
ALL FIBRES

WOOLEN
WORSTED
SILK
RAYON
NYLON
COTTON

Absolute Uniformity!

THE INDUSTRIAL DRYER CORPORATION
STAMFORD, CONN.

ROBISON
Rayon Yarns

Filament and Spun Rayon Yarns
dyed and twisted to your specifications.

ROBISON PROCESSING COMPANY, Inc.
BOSTON, MASSACHUSETTS
New York Sales: 450 Seventh Ave.

been in worsted spinning, where it is expected to hold its ground regardless of further improvements or innovations in the technique of tow-to-top conversion. Upon this latter point, entirely new sliver making mechanisms are expected to make their appearance in due course. What would then be the respective fields of the various methods cannot as yet be determined; but, on any estimate, the ultimate disappearance of carding of rayon staple seems to be assured.

Cannon Mills

(*Continued from page 125*)

positions have been found, suited to their abilities.

The department, located away from the mill, is under the direction of Capt. Harry Cannon, a former vocational teacher at Kannapolis High School who was wounded in North Africa.

A file in his office is the key to the system. In it are the records of all employees in the armed forces, showing length of employment with the company, what shifts they were on, what jobs they did, and how they did them. When the routine notice comes that a former employee has been discharged, his file is at hand.

Rarely is it more than a week before the serviceman calls on Capt. Cannon. After filling out an application for reemployment he is offered either his former position or another of like seniority and pay, or some other position he requests and is fitted for, provided such a position is open. If he has suffered some physical or other handicap during his service, he is placed in a new department and trained for a job he can handle.

To aid further in this latter problem. Capt. Cannon has charts which show every conceivable handicap a serviceman might suffer, and just how these disabilities affect him in relation to the various jobs at Cannon Mills. With the veteran's medical record at hand, Capt. Cannon can consult the charts and determine at once what types of work he would be fitted for.

Capt. Cannon's interest in the returnee does not end with the job placement service, however. The veterans are told to report back to him if they find they are dissatisfied with their work or cannot handle it. Likewise the overseers are checked to see how the veterans are getting along, and to impress the overseers that the company is determined to see that the veterans get every assistance in "reconverting" to civilian life.

As a secondary service, Capt. Cannon's office is working with the returned veterans to assist them to obtain hos-

CALCO ACETATE DIAZO BLACK GSH DUSTLESS

Calco Acetate Diazo Black GSH is a non-subliming green-black shade, having excellent penetrating and leveling properties. It dyes well at low temperatures and disperses readily under practically all dyehouse conditions.

The excellent general fastness properties of Calco Acetate Diazo Black GSH make it desirable as an all-purpose product. It is especially recommended for jig and beck dyeing of all qualities of acetate and acetate-mixed fabrics.

Write to Calco for further information on Calco Acetate Diazo Black GSH.

Calco

CALCO CHEMICAL DIVISION
AMERICAN CYANAMID COMPANY
Bound Brook, New Jersey

New York · Chicago · Philadelphia · Boston · Charlotte · Providence

TEXTILE BANKING COMPANY

Inc.

Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK

pitalization and other benefits, help in insurance matters, etc. Often this type of service commences even before the veteran returns to his job, and it may extend to assisting his family.

Two years have proved that the assistance program is more than appreciated by the returning veterans. It has boosted employee morale by showing the men that Cannon Mills has an earnest desire to help them.

Interestingly enough it has shown one other thing, according to Capt. Cannon. That is that life in the armed forces has changed very few employees. Those who were steady and competent before entering service have returned with the same characteristics. And those who were undependable when they left still are likely to take unauthorized vacations at any time.

In short, says Capt. Cannon, the returning veteran's willpower is the deciding factor in his re-adaptation to civilian life. One who has made up his mind to succeed is bound to do so. But the one who really doesn't care often fails. Even the Cannon Mills special servicemen's department cannot help him there.

Cotton Export Plan

(*Continued from page 143*)

available. The surplus, that is the amount over and above carry-over needs, is estimated to be 2 or 3 million bales this year. This is a little less than half the surplus available as of Aug. 1, 1945, when the carry-over was about 11 million bales and surplus therefore approximately 6 million bales.

THE JAP PLAN. The Japanese interagency agreement was signed in late February by the Departments of War and Agriculture, and the U. S. Commercial Co. (subsidiary of RFC), in concurrence with the State Department. In brief, it calls for a supply of raw cotton to be sent to Japan to take care of minimum needs of that country and to allow for the manufacture of sufficient textiles to be sold in the open market to pay for the cotton, plus a comparatively small quantity for encouraging Japan's international trade. In other words, payment for the cotton will be made in manufactured textile goods. This is a barter system which, it is understood, the State Department would not countenance in normal times. According to the plan, bartering will be dropped as soon as it is feasible to resume private trading.

The markets where these textiles will be sold, according to the government spokesman, will be those which this country is attempting to supply and cannot, such as Burma, China, Philippines, Netherland East Indies, and the Near

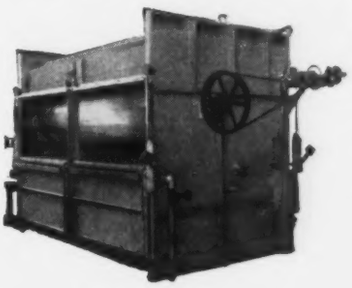
"The Fleet Line"

TLBT PIECE DYE KETTLE

What a Prominent Knit Goods Manufacturer Thinks About It

"We have now had our 8' TLBT Type Piece Dye Kettle in operation for several weeks. We have run all available types of material with remarkably good results. I can not praise you too highly on the successful engineering of this kettle . . . the construction of the kettle itself is very sound." So reads a letter from a prominent manufacturer of knit goods.

The Type TLBT is the greatest advance in piece dye kettle design in 15 years for the following reasons:—



1. Nearest thing to universal kettle ever offered.
2. No tangles or tie-ups.
3. Goods balloon, eliminating wrinkles, creases, and dye streaks.
4. Knurled drum reel eliminates all slip.
5. 10% or more saving in dyestuffs.

Circular on request

RIGGS AND LOMBARD INCORPORATED

FOOT OF SUFFOLK ST., LOWELL, MASS.

Sterling Ring Travelers

RING FLANGES

It may be a flange 2 ring but if the flange or shoulder is thicker than usual, a Ring Traveler must have a larger opening to be hard tempered and go on without breaking.

D. J. Quillen, Box 269, Kingsport, Tenn.
D. C. Anderson, Box 629, Cedartown, Georgia
H. B. Cabaniss Monroe, N, Carolina
Talleres Coghlan Munro, F. C. Est. Argentina

STERLING RING TRAVELER CO.
FALL RIVER, MASS.

HILD Floor Machines

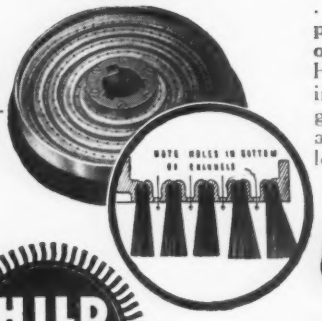
Left—HILD Tank Type Shower-feed Floor Machine

KEEP ALL YOUR FLOORS *Clean* AND *Slip-Safe*

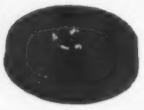
Right—HILD Plain Handle (Standard) Floor Machine

HILD Floor Machines are designed for use with the easily interchangeable attachments pictured below to condition and maintain floors of all kinds . . . either in the mill or in office areas. Scrubbing with the Tank-Type Machine and the patented HILD Shower-feed Brush gets floors cleaner with less scrub-soap solution . . . cuts soap costs . . . does not splash water on machinery or furniture. Scrub-soap solution is fed from the tank on the handle of the HILD Floor Machine to the back of the Shower-feed Brush . . . then passes through accurately spaced holes penetrating the brush back between each row of bristles.

HILD Floor Machines speedily scrub open areas in lanes between machines . . . yet are easily guided into hard-to-reach spots under and around machinery. They are sturdily built for long, trouble-free service.



HILD Shower-Feed Brush



Brush for Waxing or Polishing

Polishing Buffer

Steel-wool Pad and Holder

***Write today for* FREE CIRCULAR**

HILD FLOOR MACHINE COMPANY

1313 W. Randolph St., Dept. TW 6, Chicago 7, Ill.

HUMIDIFICATION

500 Times Finer Than Spray

By the AIR-PERME-ATOR

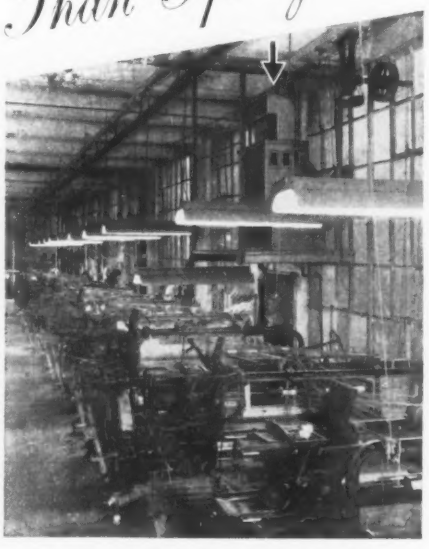
Converts water into a film which is 500 times finer than spray, and the air is saturated to the fullest amount of humidity inside the machine.

There is no spray of droplets to spot yarn, or rust equipment.

This modern system is in use in scores of warping, winding, carding, and weaving departments of mills that demand the best in everything.

For Cooling, Too

Many mills report a marked cooling effect when Air-Perme-Ator is used.



Write for full facts about this new control of humidity and temperature.

AIR-PERME-ATOR MFG. CO.

300-302 Preakness Avenue **Paterson 2, N. J.**

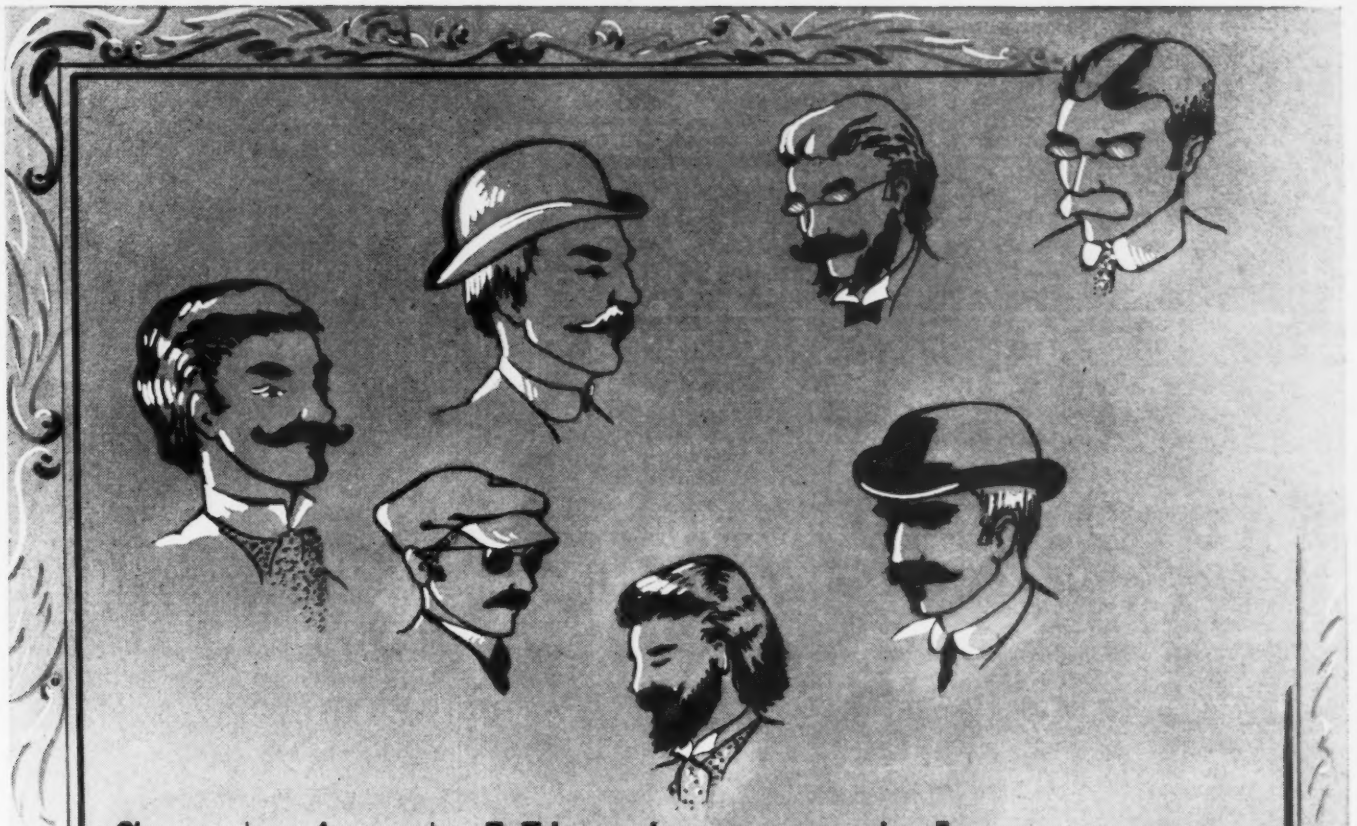
East. It is contended that out of an estimated production this year of 9 to 10 billion yards of broad woven cotton fabrics, the U. S. will export only about 900 million yards or roughly 10%.

The prices for cotton textiles offered for sale will be commensurate with OPA ceiling prices for export of U. S. textiles. That means when Japanese textiles are sold in Burma, for example, the prices would be the same as similar U. S. manufactured goods for export.

Cotton is sold by USCC under the direction of the U. S. Department of Agriculture, and the Departments of State and War. Officials of the Department of Agriculture will deliver cotton ship side; the U. S. Commercial Co. will pick it up and take it to the port designated by the Army; the Army (in this case General MacArthur) will take over until the finished textiles are ready and loaded in vessels. Then USCC will be responsible for sale of cotton textiles in the world markets, after which it will turn the money over to Commodity Credit Corp. as credit against cotton supplied, until the account has been settled. Any balance is turned over to the Supreme Commander for the benefit of the Japanese economy. Japan will use her own labor. The U. S. government will have the proceeds from 60% of the textiles manufactured, out of which CCC will receive what is due for cotton and incidental expenses, shipping, etc., and the remainder will go to General MacArthur. The Japanese will have the benefit of whatever funds accrue from the sale of the other 40%.

Shipments of raw cotton to Japan have been set for 650,000 bales by the end of the current marketing year, Aug. 1. However, strikes, labor difficulties, etc., are delaying the shipments. It was planned to ship 422,000 bales during the second quarter. The qualities will be predominantly low grades and shorter staples, some of it the "left-over" of crops since 1936.

JAPAN BACKLOG. There has been some speculation regarding the amount of cotton that may be needed in Japan in view of the recent "find" of textiles, yarns, and cotton. The amount discovered in Japan was the equivalent of 120 million yards, over half in woven cotton fabric, for military use, already packaged. The remaining amount was yarn and about 25,000 bales of cotton. About 60 million yards of goods will be set aside as advance credit for American cotton. The low-count yarns and tinged cotton will be woven into fabrics for working classes and for some industrial uses. The supply does not take care of urgent needs now for shirting, kimona cloth, fish nets, etc. The chief effect of the existing Japanese backlog is to provide a much quicker way to pay for



Great-Aunt Minnie married a "Pig-in-a-Poke" . . . . . .

. . . not that Aunt Minnie was taking too much of a chance. When she wanted to see what Great-Uncle Joshua actually looked like, all she had to do was part the whiskers. It wasn't exactly that all men looked alike in those days . . . it was just that "You couldn't see the trees for the forest."

Back in those bush-ridden days, Aberfoyle was starting as a weaving and mercerizing company, pioneering, even then, in research and experimentation, to bring finer quality, beauty and wear to cotton yarns. Today, the yarns you obtain from Aberfoyle incorporate the many improvements that arose from the new technical developments brought about by wartime tests. Aberfoyle yarns mean better service to you, finer fabrics, greater customer-acceptance.

Made of Durene multi-ply mercerized combed cotton yarn
4 WAYS BETTER than ordinary cotton yarns
EXTRA COMFORT ---more absorbent
EXTRA STRENGTH ---longer wear
EXTRA QUALITY ---lasting lustre
EXTRA SERVICE ---easy to wash
NEOPHIL *
MADE OF Weartwist YARN MERCERIZED COTTON
* Neophil, the Nylon Seaming and Looping Thread for Nylon Full-Fashioned Hosiery, made by the Premier Thread Co., Pawtucket, R. I.

ESTABLISHED 1883

Aberfoyle

AMERICA'S OLDEST MERCERIZERS

Durene

ABERFOYLE MANUFACTURING COMPANY
123 South Broad Street, Philadelphia, Pa.

— and in the South

ABERFOYLE MANUFACTURING COMPANY
Belmont, North Carolina

Representatives in principal textile centers of the world

BOOTH

Quality CARD CLOTHING

High-grade carders merit the best card clothing. All BOOTH card clothing has a firm fabric or leather foundation yet is fully flexible, which reduces the possibility of shelling out. It is available with rehardened points.

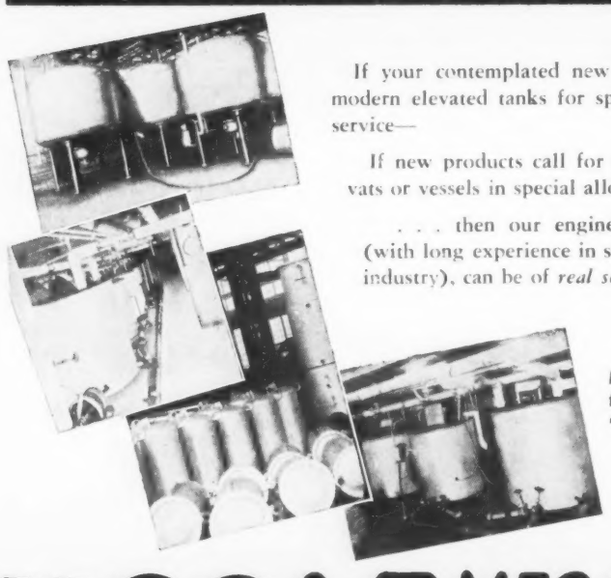
Write for full information and prices on the many items in BOOTH'S complete line.

Benjamin Booth Company

Allegheny Ave. & Janney St., Philadelphia 34, Pa.

Is your mill planning

EXPANSION *or* MODERNIZATION?



If your contemplated new buildings require modern elevated tanks for sprinkler or general service—

If new products call for new kiers, kettles, vats or vessels in special alloy steels—

. . . then our engineering department, (with long experience in servicing the textile industry), can be of *real service* to you.

Submit us your problems, or write for a copy of "Tank Talk."

R.D. COLE MFG. CO. ESTABLISHED 1854

Newnan Ga.

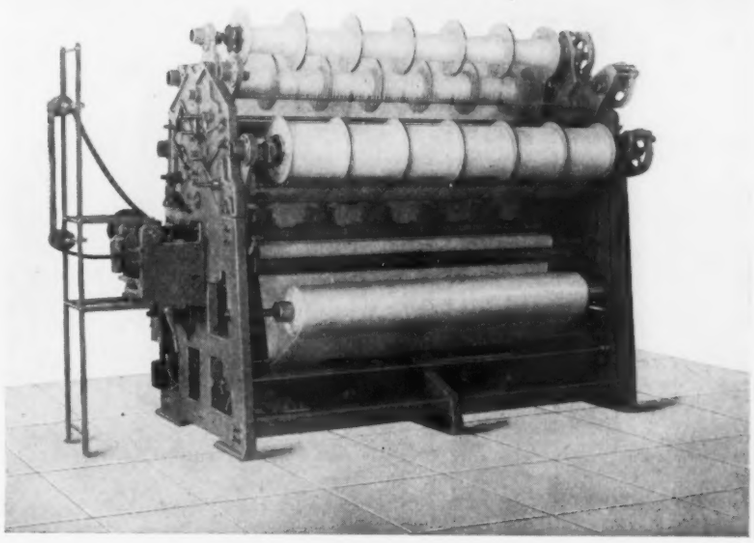
cotton now being shipped to Japan.

Another speculation is whether or not India will be permitted to share the Japanese market for raw cotton. Department of Agriculture officials are endeavoring to determine the need for an export outlet. Meantime, India has been asked to show figures to indicate her surplus, what grade of cotton she has, and how much may be expected in view of her increased consumption and decreased productivity. Before the war, Indian cotton was mixed with American cotton for manufacture of coarse Jap goods. This is her claim to the market. The hearsay, however, is that India has now stopped exportation of raw cotton as of May 15. If this is true, the problem has been solved.

THE GERMAN PLAN. The deal for supplying raw cotton to Germany follows along the lines of the Japanese agreement except that in this case consideration must be given to the provisions of the Potsdam agreement. Under this agreement, proceeds from exports would go into the pool of the four countries governing Germany and must be paid out pro rata according to imports. Detailed arrangements have been discussed with General Lucius Clay in Berlin by E. D. White, representing the Secretary of Agriculture. When Mr. White reached Germany, he learned that only Great Britain and the U. S. were contributing to the pool. In order to have some way of paying for the cotton imports, he advocated that textiles manufactured in German mills, over and above minimum needs, could be sold and the proceeds applied in payment for the specific import of cotton rather than becoming a part of the entire pool. All zones would have the same privilege. For example, 44,000 bales of cotton were shipped to Germany from the U. S., payment for which came from a special government appropriation. The new plan would make it unnecessary for General Clay to seek appropriations from Congress for such purpose. When Mr. White left Germany recently, the other three occupying powers were genuinely interested in the program as it might be applied to their zones. The Department of Agriculture has the "go" sign to ship into the U. S. zone.

The capacity for mill consumption of cotton in all zones in Germany today is close to a million bales. In the American zone the capacity is about 286,000 bales on the basis of a 48-hr. work week. It was learned that Germany has sufficient coal and transportation facilities to take care of an operation of this size, if enough food can be obtained. Shipping instructions have been placed against 88,000 bales—half of it to leave at once and the other half to follow as

The NEW REINER KAY LOOM IS HERE!



THE NEW REINER COMBINATION KNITTING AND WEAVING LOOM

is unexcelled in range of performance, speed, quality of production and workmanship.

The machine is unique in that it employs a warp and filling as in weaving, but instead of interlacing, it ties a knot around their intersection, using a knitting stitch.

The fabrics can be made to resemble woven goods closely and also knitted fabrics. In such fabrics stretch can be limited to that existing in the yarn only if desired. Extremely porous fabrics can be made which do not exhibit the looseness and slippage usually present in similar knitted or woven cloths.

Pattern control permits wide variations in design, stripes (warpwise or fillingwise), plaids, checks on the square or diagonal, which adds much to the variety of styles that can be produced.

The following is a partial list of products that can be made on this new Reiner combination knitting and weaving loom:

- ELASTIC CORSET FABRICS (one or two-way stretch, full width section or ribbon)
- SUSPENDERS
- HOSE WELT TOP
- SHOE CLOTH (elastic)
- UPHOLSTERY FABRICS (elastic)
- SWIM SUITS (elastic)
- DRESS FABRICS (cotton, rayon, wool, worsted, linen, etc.)
- DRAPERY FABRICS
- CURTAINS
- VEILINGS
- BRUSHED FABRICS (full width or narrow)
- GLASS FABRICS (full width or narrow)
- ASBESTOS FABRICS (full width or narrow)
- All fabrics can be made with or without filling.

Ask for Details or a Demonstration at our showrooms in Weehawken.

ROBERT REINER INC.

FOUNDED IN 19

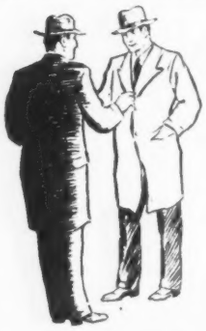
550-556 GREGORY AVENUE
WEEHAWKEN, NEW JERSEY

10 MINUTES FROM TIMES SQUARE. Take Bus Nos. 61, 67, 167 from the Times Square Public Service Terminal at 260 West 42nd Street, New York City. Get off at Pleasant Avenue, Weehawken, New Jersey. From there turn left and walk through the underpass up to Gregory Avenue . . . . . TELEPHONE: UNION 7-0502, 0503, 0504, and 0505.

THE TEXTILE INDUSTRY IS TALKING ABOUT

DRUMMOND SOAP FLAKES!

THE SAME FEATURES OF DRUMMOND SOAP—*Plus* EASY TO USE—SUDS BETTER!



Drummond Flakes are so easy to use! And you couldn't get a flake that suds better! Note these Drummond Soap features: high body with low alkali content . . . leaves fabrics perfectly clean with softer feel, brighter colors, and whiter whites.

Try Drummond Flakes and note the difference in your fabrics. Ask for Drummond Flakes or Solid.

Want to try a sample first? Write today for free working samples. Try them on your own goods. You'll want to use Drummond all the time.

Standard Soap Co. of Camden

205 South 2nd St.
CAMDEN, N. J.

G. TANGUAY
281 Harris Ave., Woonsocket, R. I.

QUALITY RICHMOND PRODUCTS

NYLTEX
FOR KNITTING
NYLON

Use in trough

Keeps Needles, Sinkers, and Machines Clean

Does Not Strip Size

Send for FREE Sample

NYLTEX

RICHMOND OIL, SOAP & CHEMICAL CO., Inc.
1041-43 FRANKFORD AVE.
PHILADELPHIA 25, PA.

DESIGN and MANUFACTURING ENGINEERS

WEAVING and KNITTING EQUIPMENT

Full Staff of competent engineers and complete manufacturing facilities.

We have successfully solved many special equipment problems for leading mills as well as recognized textile equipment manufacturers.

We invite you to submit to us your problems on weaving and knitting equipment. Write today.

KIWI ENGINEERING CO.

DESIGNERS AND BUILDERS OF SPECIAL MACHINERY

2636 N. Hutchinson St., Phila. 33, Pa.

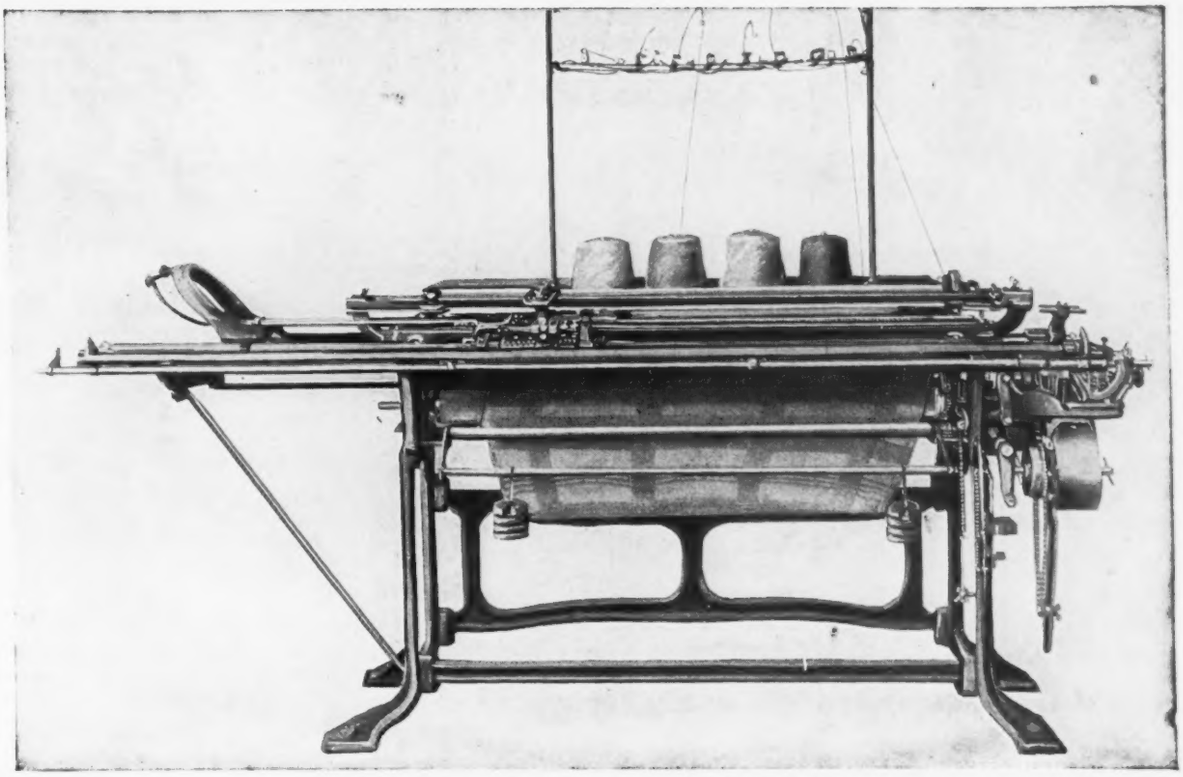
soon as possible. It is planned to ship about 154,000 bales of American cotton within the next six months, Mr. White stated. According to present arrangements, any U. S. cotton shipped into zones of Germany governed by Great Britain, France, or the U.S.S.R. will be handled by the U. S. Office of Military Government for Germany. As in the case of Japan, CCC will receive the U. S. prices current at the time of delivery for the types of cotton delivered plus transportation costs. USCC will deliver the cotton, receive and sell the textiles manufactured for payment.

FRENCH INTERESTED. The French have indicated that they will go along with this plan as applied to the U. S. zone and may be interested in exporting some U. S. cotton to their zone of operation. However, the talk of starting with a shipment involving only 1,100 bales would be too small an amount to be practical and the 220,000 bales which they say might be used in a six-month period is probably too high to be realistic. The importance lies in the fact that they approve the program, an approval which is necessary because of the terms of the Potsdam agreement.

The British are interested in the proposal. But how much U. S. cotton would be used is not clear, since the British could use their own colonial supplies. The British zone requires about 105,500 bales for the second six months of this year and thereafter as much as 158,500 bales for six-months.

In the opinion of Robert C. Jackson, investigator for the Joint Intelligence Objectives Agency, a ready market can be counted upon for U. S. cotton in Germany in the future, if acceptable means of exchange can be arranged and other matters, such as price, can be solved to the mutual advantage of both countries. Members of the Bremen Cotton Exchange say that "the only way to reopen the flow of cotton to Germany can be found on a basis of trust, resulting in advances of raw materials or of funds."

The Austrian market is one in which the Department of Agriculture hopes to get an opening wedge. That country needs about 100,000 bales of cotton. Some of the needs are being supplied by the Swiss and some Russian cotton is being offered by Hungary. Austria is not regarded as an enemy country; it is a liberated area with its own form of government. Negotiations are made with an Austrian bank approved by the Austrian government in the form of a barter deal. At present she hardly knows what way to move with Hungary on one side governed by Russia and with the Swiss on the other side. She is interested in 8,000 to 10,000 bales to try out and such an amount is now under



The Robaczynski "V" Type Flat Knitting Machine

Fully automatic for collars and cardigan garments, having cardigan locks, changing from flat stitch to cardigan stitch, or vice versa.

- **Automatic setting of stitches to FOUR positions.**
- **Automatic change of yarn carriers on FOUR bars.**
- **Rear Chain Drive.**
- **Motor Driven.**
- **Double short chain system controlled by a drum counter.**
- **Metal cloth takedown.**
- **Electric stop-motion.**

We will also build machines on request with sinkers instead of high and low butts to make 1 and 1, or 2 and 2, and then jersey stitches. Sinkers are safe and fool-proof.

New! The Versatile High Speed Tricot Machine

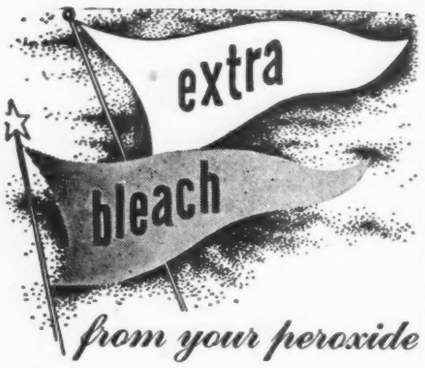
Under development since before the war the new Robaczynski two bar, 26 and 28 gage Tricot is so constructed it will withstand speeds in excess of 500 courses per minute in a 180 inch width. It will accommodate a 21-inch beam or any other standard size.

It is built in our modern plant in Brooklyn where for over 35 years we have been building knitting machinery. This Tricot machine has novel features and improvements unlike any other Tricot warp knitting machine. A big producer over a long and carefree life for owner and operator may be expected of it. It can be seen now, by appointment, in our new show room at the plant.

• Flat Knitting Machines • Link & Link Machines • Border Machines • Tricot Machines

ROBACZYNSKI
MACHINE CORPORATION
PURL STITCH (Links and Links) and FLAT KNITTING MACHINES

340 Ten Eyck St. **Brooklyn, N. Y.**



from your peroxide

To save peroxide, use Star Brand Silicate as the bleaching assistant. Its purity adds extra stability to the bath, more evenly controlling the release of the oxygen. Its reserve alkalinity counteracts acid products.

Low dilutions which "break" ordinary silicates have no effect on Star, for there's nothing in this quality silicate to precipitate. Baths made up with Star have been known to stand up for a year.

Change to Star now and conserve your bleach.

PHILADELPHIA QUARTZ COMPANY
Dept. A, 127 S. Third Street
Philadelphia 6, Pa.

star BRAND
PQ SILICATES OF SODA

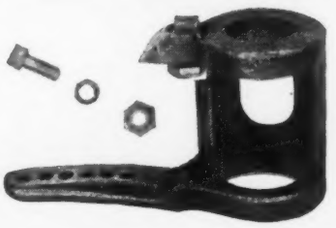
discussion only as a starter for future, more sizable deliveries.

PLAN FOR ITALY. A cotton-textile agreement which specifies that Italy would export approximately 75 million yards of cotton broad woven goods by July 31, with the largest part of these fabrics going to countries now critically undersupplied, has been announced by the Combined Textile Committee. This committee is made up of representatives from the U. S., United Kingdom, Canada, India, and France. The agreement contains the following recommendations: (1) A minimum of 27 million yards to be made available to the Far Eastern deficit areas, with the suggestion that it be allocated to the Netherlands East Indies and French Indo-China; (2) a maximum of 9 million yards to be exported to the Western Hemisphere, with not more than a third of the export designed for U. S. and Argentina; (3) a maximum of 5 million yards to be exported to Egypt. If Italian exports exceed 75 million yards by July 31, the agreement stipulates that up to 25% of the excess may be exported to the Western Hemisphere and up to 10% to Egypt.

Italy has stated that it is vital to have a dollar market for textiles. While a considerable amount of goods could come back for sale in this country, officials believe that the greater part will go to South America and that what comes here will be the specialized, finer type of goods.

An investigator who recently visited Italy was surprised to find Genoa harbor clogged with ships loaded with raw cotton of which two-thirds were from Brazil, and the remaining third from Egypt, U. S., Mexico, and UNRRA. The cotton from Brazil was paid for with U. S. dollars chiefly. After this supply is used, it is expected new shipments will be predominantly American, financed by the Export-Import Bank.

Czechoslovakia, which had turned to Russia as a source of supply for raw cotton, from whom she has received 30,000 bales, is dissatisfied with the operation and now is considering obtaining cotton from U. S. under an Export-Import Bank loan. She has also negotiated a barter deal with Egypt for a small quantity of long-staple fiber, payment to be made in textiles. From the U. S. she would like to have over a 12-month period approximately 130,000 bales of cotton. The pre-war capacity of Czechoslovakia was about 400,000 bales, out of which 300,000 bales were from U. S. The present capacity ready to go is about two-thirds of prewar. Mills are now operating at about two-fifths of prewar capacity on Russian and UNRRA supplies. The supply of raw cotton on hand is low.



Re-condition your TRAVERS LEVERS

Worn and damaged Travers levers can be reconditioned with our special hardened lug bolt. Save the casting and the cost of new travers levers.

After this reconditioning a new lug bolt inserted by your own mechanic as required will be all that's necessary for efficient operation.

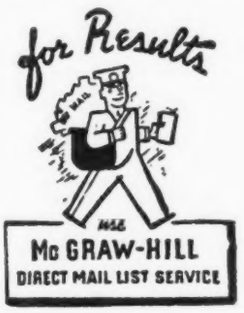
Wayne Manufacturing Co.
Honesdale, Pa.
Manufacturers of Textile Mill Supplies

Solves the Problem of Mailing List Maintenance!

Probably no other organization is as well equipped as McGraw-Hill to solve the complicated problem of list maintenance during this period of unparalleled change in industrial personnel.

McGraw-Hill Mailing Lists cover most major industries. They are compiled from exclusive sources, and are based on hundreds of thousands of mail questionnaires and the reports of a nation-wide field staff. All names are guaranteed accurate within 2%.

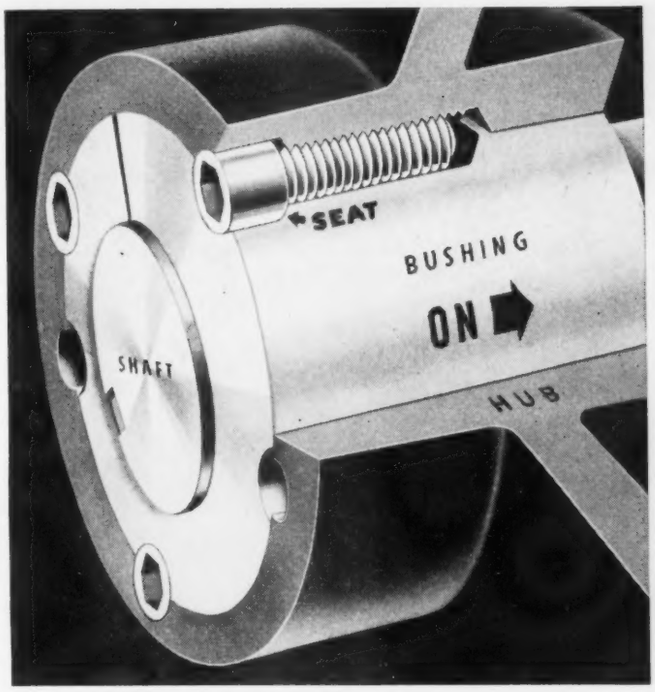
When planning your direct mail advertising and sales promotion, consider this unique and economical service in relation to your product. Details on request.



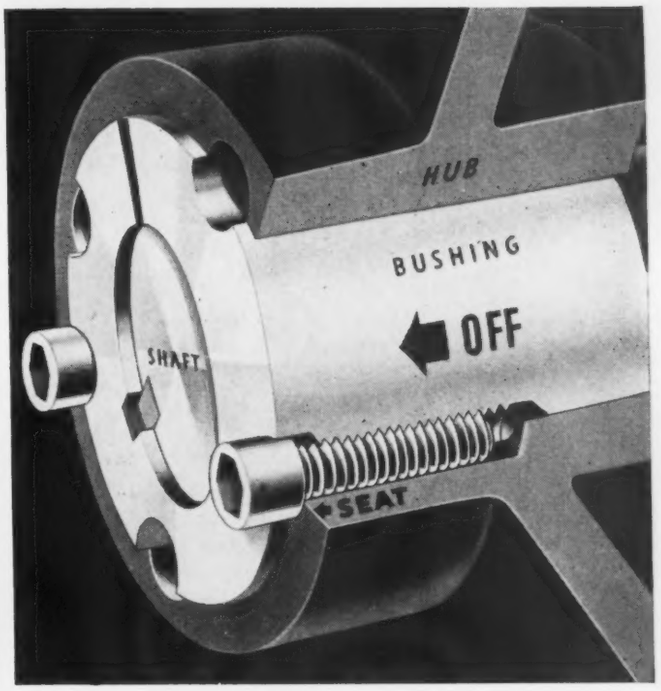
McGraw-Hill Publishing Co., Inc.
DIRECT MAIL DIVISION
330 West 42nd St., New York, 18, N. Y.

HERE'S HOW IT WORKS

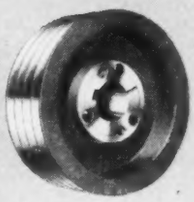
...SIMPLE, ISN'T IT?



Note that only the HUB is threaded. Screw-head seats itself against offset in bushing. As the screw is turned, the sheave is drawn up—wedged—with a firmness equivalent to a shrunk-on fit, whether the shaft is standard or normally undersize.



Note that here only the BUSHING is threaded. Screw-head seats itself against face of hub. As the screw is turned, the wedge is disengaged. Due to its steep taper, the bushing disengages with less effort than in any other sheave.



NEW TAPER-LOCK BRAND SHEAVE

Patent [illegible] for

THE SYMBOL THAT CAME TO LIFE

The man who walks into your factory wearing this symbol is the living embodiment of a service which gives you the correct answer to your problems in efficient mechanical transmission of power. He is the Dodge Transmissioneer.

Here is the simplest, surest mechanism ever devised for holding wheels to shafts. No flange. No collar. No protruding parts. Easy on—easy off—and holds fast! Breaks all speed records in mounting and demounting. Slip it on, line it up and tighten *while sighting*... A complete range of stock sizes, from Dual Duty to C and D. For details call the Dodge Transmissioneer, your local Dodge distributor. Look for his name under "Power Transmission Equipment" in classified phone directory.

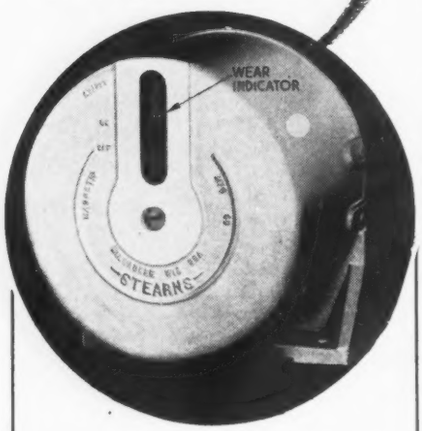
DODGE MANUFACTURING CORPORATION, MISHAWAKA, INDIANA

DODGE
MISHAWAKA

Copyright, 1946, Dodge Mfg. Corp.

NAME PLATES • FOR YOUR NAME PLATE REQUIREMENTS, WRITE OUR SUBSIDIARY, ETCHING COMPANY OF AMERICA, 1520 MONTANA STREET, CHICAGO 14, ILLINOIS

FOR
BETTER
BRAKE
Performance



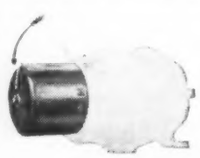
STEARNS
MAGNETIC
offers LARGER
BRAKE for
HEAVIER Loads

A Magnetic Disc Brake that will develop a torque of 575 lbs. or the equivalent of 100 HP at approximately 1000 RPM, now is available in the Stearns 1300 Series. It can be supplied in floor or motor mounting types for AC or DC current.

We can help you solve problems involving effective retarding of motors or machinery, whether for one or a sequence of controlled stops, whether for horizontal or vertical mountings.

Stearns Magnetic Disc Brakes are being used efficiently and satisfactorily by outstanding motor manufacturers and machinery makers in hundreds of exacting operations.

Consult Stearns Magnetic, Milwaukee 4, on your braking problems.



The magnetic brake with the lining wear indicator and manual release — distinctive, original.

STEARNS
MAGNETIC MFG. CO.
646 So. 28th St., Milwaukee 4
Magnetic Separators
Pulleys Drums Clutches

A Card-Grinding Symposium

(*Continued from page 117*)

grinding is proved by the relatively few fillet replacements caused by short wire. Shedding, breaking out, and other legitimate results of age are the main reasons for replacement.

FURTHER TESTING NEEDED. Granting that Mr. Fogel can prove that unnecessary grinding is performed on some card wire, and knowing that the intra-mill variations in grinding speeds can and should be corrected, I should like to ask: What practical substitute is there for establishing and maintaining the grinding speeds recommended by the builders of the rolls? Also, although it is admitted that the present regular schedule of light grinding does unnecessary grinding (but with no apparently adverse after-effects either on the clothing or the product) the question remains —is there a better method of grinding?

One other question that should be answered is: Should the need or extent of grinding be left to the judgment of the grinder or carder? And, finally, while Mr. Fogel has shown the existence of certain defects in our present system of grinding, has he suggested a remedy for them?

Precise detection of the condition of card wire requires a certain skill. Many defects can exist, but carders generally believe that regular, light grinding, even though it exceed the minimum requirements, is the best positive prevention of dull wire and the attendant poor quality of card product.

Standardized Grinding Is UNWISE, Say CARDERS

THERE ARE ALMOST as many theories on Mr. Fogel's interesting card-grinding ideas as there are grinders. In an effort to reach a common ground where these theories may be assembled and judged, a member of TEXTILE WORLD's editorial staff interviewed a large number of carders, superintendents, and engineers; and from these interviews, the following pertinent facts evolved:

1. Most carders confirm Mr. Fogel's main theme. They agree that the variations in grinding practices seem to be considerably beyond those justified by processing differences; and they agree further that, while complete standardization is impractical, standardization within the limits of the mill's own requirements is practical.

2. Independent grinder sections may account for some variations, but there is no inclination on the part of mill men to suggest a different system of grinder management. The only exception is one superintendent who schedules grinding periods entirely by card production.

3. Some carders express the opinion, and other carders challenge it, that grinding effects only an abrasion of card wire and that when the necessary amount of wire has been ground off, it is not important to consider the amount of time the grinder is left "running," providing that no further abrading is being done.

4. Grinding of the sides of the wire, in addition to simple abrading, is obtained by the traversing action of the grinder and the coarse, granular construction of fillet. One machine-shop foreman estimates that side grinding to a depth of about 0.002 in. is effected.

5. Opinions as to the importance of grinding-speeds differ considerably. Several mills have experimented in the last few years with grinder speeds, and most mill men believe that the safer course is to follow the specifications of grinding-equipment manufacturers.

Handling Solvents

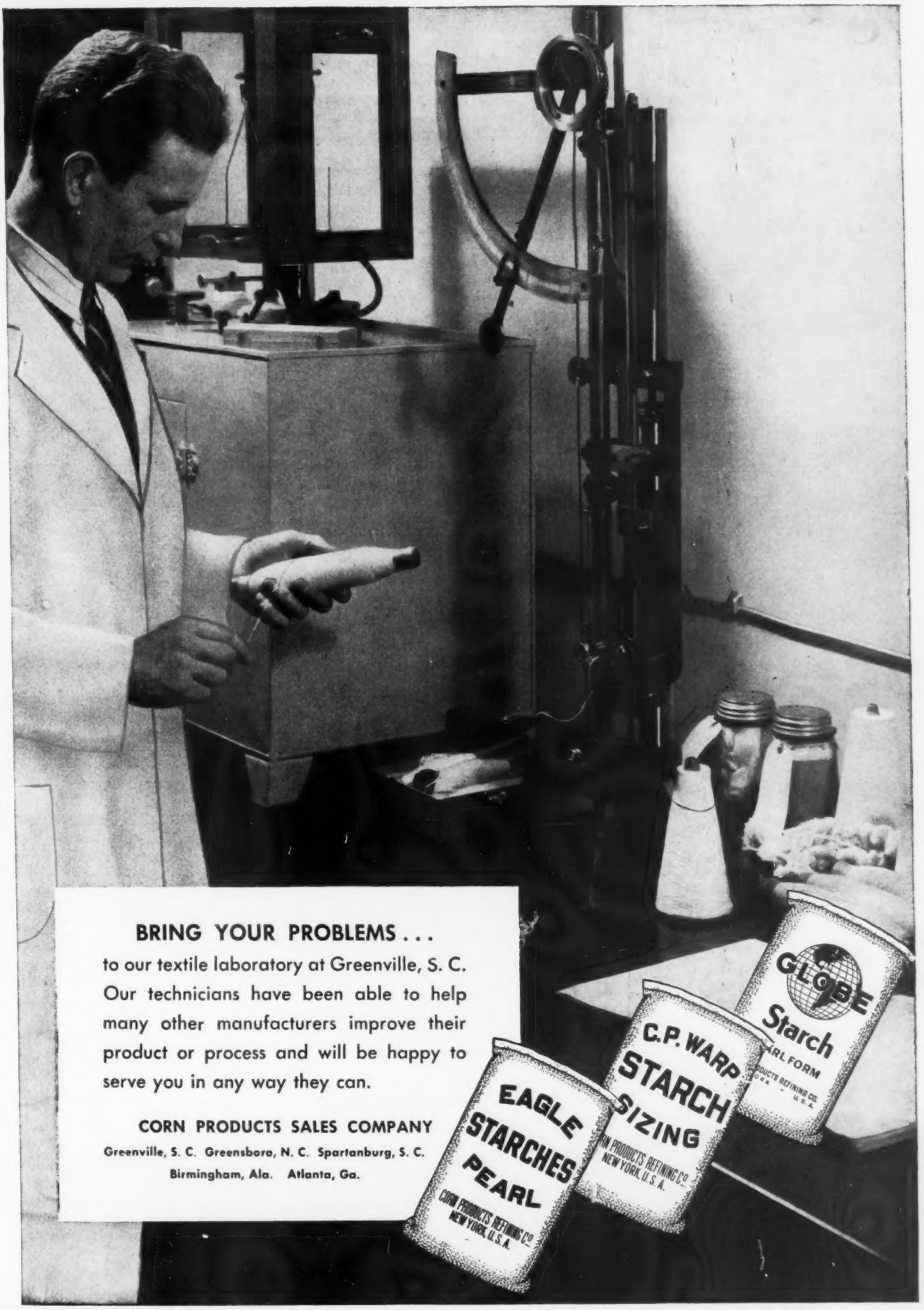
(*Continued from page 119*)

for the plant. His suggestions for work procedures should be followed carefully.

CHECK EQUIPMENT. When solvents are in continuous use and their vapors are being controlled by closed systems or permanent ventilating installations, the proper operation of the protective equipment should be checked regularly by air analyses. These tests can be made by competent chemists. If necessary, the state industrial hygiene offices will usually give assistance in sampling and analyzing plant atmospheres.

Irregular work involving solvents presents a more serious problem with regard to protection from dangerous vapor concentrations. This work includes such operations as removal of oil and grease from machinery, cleaning the insides of tanks, and experimental or emergency runs.

Portable ventilating units can often be employed advantageously to evacuate vapors from the point where solvents


BRING YOUR PROBLEMS . . .
to our textile laboratory at Greenville, S. C. Our technicians have been able to help many other manufacturers improve their product or process and will be happy to serve you in any way they can.
CORN PRODUCTS SALES COMPANY
Greenville, S. C. Greensboro, N. C. Spartanburg, S. C.
Birmingham, Ala. Atlanta, Ga.
EAGLE STARCHES PEARL
CORN PRODUCTS REFINING Co NEW YORK, U.S.A.
C.P. WARP STARCH SIZING
CORN PRODUCTS REFINING Co NEW YORK, U.S.A.
GLOBE Starch

DYEING OF
ACETATE YARN
MADE EASY
•
USE THE
PACKAGE
METHOD

No skeining before dyeing—no spooling afterward

We receive cones as a supply and deliver on the dye tubes or cones.

Fast Colors
Large Batches

Atlantic Rayon
CORPORATION

Dyers and Converters of Synthetic Yarns for All Industries

Plant at Providence 1, R. I.

BRANCH OFFICES:
Empire State Bldg., 5th Ave.
New York 1

3701 North Broad St.
Philadelphia 40

★

are being used, especially for short jobs like cleaning machinery. The mouth of the intake duct should be placed as close to the work as possible. If there is a second intake duct, it should be fastened five or six inches above the floor, directly beneath the point where the vapors are formed, to catch those which escape the first vent. The exhaust duct should lead to the open air, and the outlet should be placed so that the contaminated air will not be blown toward other workers.

RESPIRATORS. Individual respirators give dependable protection from solvent vapors if they are properly chosen for the job. They are uncomfortable and undesirable for routine use and normally are employed only for emergency jobs. Chemical canister respirators, or gas masks, can safely be used in vapor concentrations under 2% for a period of one to two hours. They should be of a design approved by the U. S. Bureau of Mines and must be properly charged for atmospheres containing solvent vapors.

If there is a possibility that the air will be heavily contaminated or that the exposure will last more than two hours, it is necessary to use an approved supplied-air respirator. Respirators of this type should also be worn for work in tanks, pits, or other low, inaccessible places where vapors may have accumulated. In addition, the workman should wear a life-belt and life-line and should be accompanied by another man, strong enough to lift him from danger, who stays in the safe area.

A portable ventilating unit of the kind mentioned earlier may prove useful in drying tanks filled with solvent vapors before workers enter them. This procedure decreases the danger of an accident, but it does not obviate the necessity of wearing proper respirators while in the tank.

Only healthy people should do work involving exposure to solvent vapors, and it is advisable to utilize the findings of the pre-placement physical examination in assigning men to this work. Periodic medical examinations are recommended for everyone who is frequently exposed to solvents, in order to ensure that no ill effects are sustained. The records of these regular examinations may prove useful should some future question arise concerning working conditions.

In case of illness or unconsciousness which may be due to the inhalation of excessive amounts of solvent vapor, the affected individual should be promptly moved to an area where the air is fresh and free from vapor. If breathing has stopped, artificial respiration should be employed. A physician should be called and his advice should be asked before allowing the injured person to return to work with solvents. The cause of the accident should be investigated and corrected immediately in order to prevent further trouble.

Handling Nylon

(*Continued from page 131*)

One should add 24 to 50 courses to the leg, and approximately 24 courses to the foot, as compared with silk. The removal of two to four leg, heel, and gusset (sole) narowings is also suggested for best fit. In these ways, sufficient allowance is made for shrinkage, and the effect of preboarding.

Shrinkage exerts a major influence on the final fit; therefore the effect of a given change should be evaluated after preboarding and dyeing, by actual volume measurements on a form, plus fit and actual wear tests. Do not rely on flat stocking measurements.

Various denier constructions have been made. The following construction for 45-gage is satisfactory, but should be varied according to the requirements of the individual mill.

	Denier	Turns Z twist
Welt	70	7
After (Counterweight)	70	7
Main	40	25
Splicing & Heel	70	7
	40	25
Sole (gusset)	40	25
	40	25
Instep	40	25
Toe	40	25
	70	7

YARN SET UP ON MACHINE. With PVA-sized yarn, all humidification and water should be eliminated from yarn boxes. A general room humidity of 40 to 50% r.h. has been found to be satisfactory. Wherever possible, wide fluctuations in room humidity, and those above 65 to 70% r.h. should be avoided. During periods of high humidity, the humidity in the closed yarn boxes may be reduced by placing in the boxes one of the following: low-wattage lamp, silica gel, calcium chloride, or anhydrous potassium carbonate.

On the machine, the axis of the cones should be aligned with the eyelet through which the yarn is drawn. Felt or soft cotton pads placed under the cones should be sufficiently large to catch all loops of yarn which may drop from the package.

Yarn tension is of paramount importance. A satisfactory tension is obtained by running the yarn through about 450° of angularity before entering the water troughs of the machine—using either rods or wire suspended above the yarn boxes. A ¾-in. dia., lightweight (2/10 grams or less) tension ring has been sucessfully used.

When using PVA-sized yarn, plain water or ½ of 1% oil emulsions may be

Obermaier
Reg. U. S. Patent Office

STIENEN
TRADE MARK

A NEW AND MORE EFFICIENT WOOL RAW STOCK DYEING MACHINE

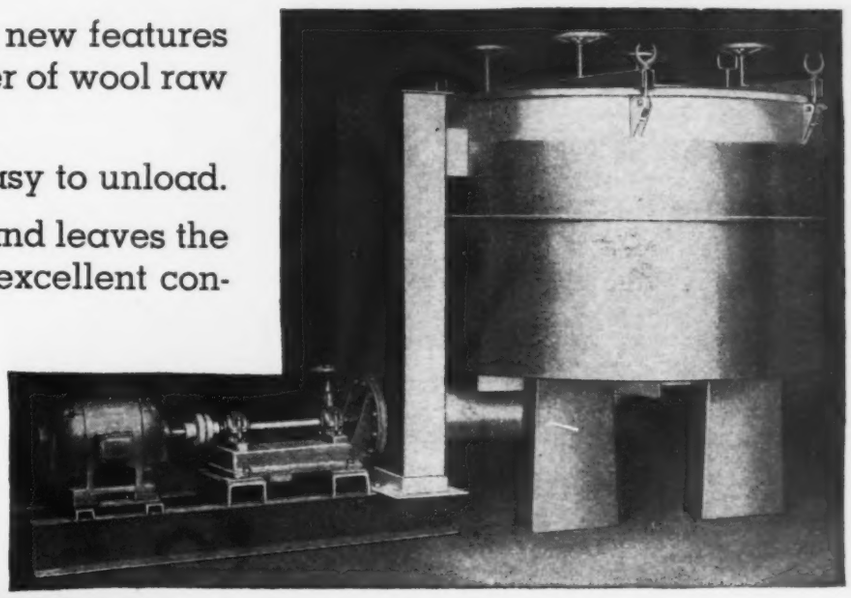
MODEL NUAPR

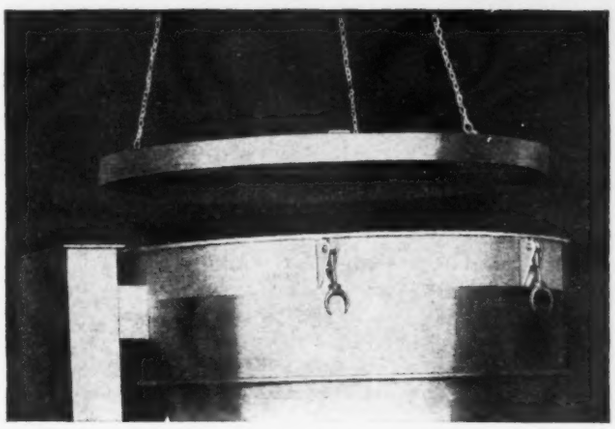
This machine has many new features that will appeal to the dyer of wool raw stock.

It is self-loading. It is easy to unload.

It assures even dyeing and leaves the stock undisturbed and in excellent condition.

It is economical to operate.





This machine is easy to unload. It has a removable perforated plate (shown above) which forms the bottom of the dye tank. The entire batch may be removed from the tank in one block by an electric hoist and dumped wherever desired.

THE MODEL NUAPR RAW STOCK DYEING MACHINE IS SELF LOADING

By *blowing* the raw stock into the machine and circulating the water downwards, the stock *packs itself* downward.

This machine prevents felting, channelling, or fibre disturbance.

The steam intake is located in the dyestuff feeding tank, which is separate from the dye tank. The dyestuff is first distributed by a propeller before reaching the material, giving a steay flow of liquor at low pressure even at the boiling point.

Other advantages include: Easy sampling without opening the machine—automatic reversing device — low power consumption and operating cost —exceeding low liquor rate. All Stainless construction.

Standard Fabricators
INCORPORATED

355 WALTON AVENUE ● NEW YORK 51, N. Y.

BUILDERS OF Cotton and Wool Dyeing Machines—for Beams—Package—Raw Stock—Skeins—Rayon Cakes—Dye Spindles—Perforated Tubes—Centrifugal Pumps—Extractors and Dryers.

AGENTS

BOLIVIA & CHILE
Schneitzer & Cia Ltd.
La Paz, Bolivia—
Santiago, Chile

ARGENTINA & URUGUAY
Laser, Fleischer & Cia.
Paseo Colon 464
Buenos Aires, Argentina, S. A.

BRAZIL
Escritorio Tecnico e Comercial
"Lodovico Lazzati Ltda."
Caixa Postal 994
Sao Paulo, Brazil, S. A.

COLOMBIA
Fernando Cabo Olozaga
Apartado Aereo 37-68
Bogota, Columbia, S. A.

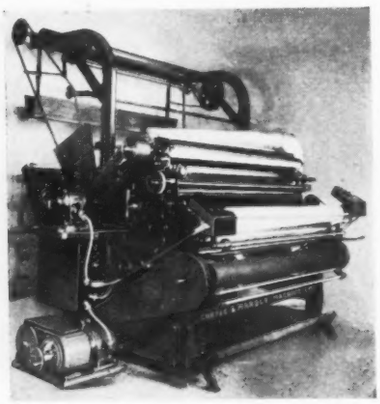
INDIA
Associated Textile Engineers
43 Forbes Street
Fort, Bombay, India

JENKINS

Metal Core Cylinder

BRUSHES

can be furnished on—



CURTIS & MARBLE WOOLEN SHEARS

Jenkins Patented Metal-core, renewable bristle brushes can be furnished on Curtis & Marble shears and brushing machines.

Cores of these brushes are of cold drawn steel or aluminum.

***Bristle* is wound on the metal cores by a patented process, with flat copper wire and special cement. Nylon bristle if desired.**

Bristle, when worn down, can be replaced by our patented process; the cores can be used indefinitely, and will never sag, split, or get out of alignment.

These brushes are moisture-proof and are easy to clean.

•

M. W. JENKINS SONS

INCORPORATED

•

Since 1877 Manufacturers of All Kinds of Brushes

Cedar Grove

Essex County, New Jersey

used in the water troughs of full-fashioned machines. Sulphonated pine oil and glycerine in the above concentration have been used. Water troughs with submerged glass rods offer a satisfactory means of wetting the yarn. When wicks are used, care should be taken to insure uniform and sufficient wetting of the yarn.

It is generally preferable to knit seamless hose with dry yarn because of the nuisance of running wet yarn on circular machines. One of the chief difficulties is the rusting of needle latches.

Excessive oil on needles and sinkers should be avoided. Oil spots, especially when accompanied by graphite marks, require severe scouring methods for removal after preboarding. However, a cleaning or spotting agent can be used to remove oil spots prior to preboarding. The problems of toxicity and fire hazard should be recognized in choosing such a cleaner.

KNITTING PROCEDURE. Satisfactory nylon full-fashioned hose may be knit by either the single- or 3-carrier method at normal machine speeds. When changing a machine to nylon, it has been found desirable to retube the carriers and thoroughly clean all porcelain guides, water troughs, tension rings, tension ring wires, and snappers.

Commercially acceptable stitch formation has been developed with normal machine adjustments, such as raising of the knock-over bits. This, of course, will be affected by the height of the needles. The preboarding operation tends to set the stitch as it exists in the gray hose, so it is important that good stitch uniformity be obtained on the knitting machine.

Good selvages are dependent on yarn tension. A greater fabric width is obtained with a low fabric or roller tension. The end loops of the fabric tend to remain in place, and reduce yarn cutting by the sinkers.

Adjustment of the snapper motion is suggested to assure proper take-up with nylon. Snappers should be thoroughly cleaned to eliminate any uneven drag and should be adjusted to give uniform take-up on the machine. Improved selvages may be obtained by adjusting the press and advancing the catch bar, allowing the sinkers to hold the yarn for a longer period and preventing the loops from being cut. Proper adjustment of the shock absorber assists in the production of satisfactory selvages.

Regular PVA-sized yarn for seamless stocking welts has been difficult to knit without excessive stitch distortion. This is largely caused by the necessity of knitting very loosely in order to allow for subsequent shrinkage during preboarding. Unless the yarn is knit very loosely in the welt, insufficient stretchability will result.

A good suggestion for avoiding distorted stitches in seamless welts is to preshrink the welt yarn in relaxed condition, in boiling water or preferably in pressure steam. This may be followed by sizing and knitting. By preshrinking the welt yarn, it is feasible to knit the welts tighter since subsequent shrinkage is reduced to a minimum, still maintaining adequate stretchability.

BONING, TOPPING, AND FOOTING. A heated boning instrument has the following advantages: (a) greatly reduced hand pressure, which gives improved yarn texture at the boning line; (b) a boning line clearly visible to the topper; (c) boning line is maintained for an adequate period of time.

A change in the point and shape of the regular cold boning tool has been found to be an improvement.

The footing machine tension should correspond to that of legging machine in order to afford good matching and stitch formation. Clamps, rather than hooks, as an auxiliary to the tension roll during footing, reduce pulled threads and distorted stitches.

CLEANING MACHINE PARTS. PVA size can be removed from knitting machine parts by a wetting agent in warm water. Such solutions, brushed onto the sinkers and dividers once a week may be followed by blowing with a fine jet of compressed nitrogen. Compressed air is not suitable because it increases corrosion due to oxygen and moisture. Another suggestion is to follow the brushing by knitting some fine cotton to clean the loose particles from the knitting heads.

After cleaning, good needle-oil should be applied to the machine parts with a brush. Some mills have attempted to prevent size deposit by brushing the needles and sinkers with trough emulsion every set or so.

The preboarding of nylon hose tends to "set" crayon marks. However, there are several soap crayons that are removable in the usual scour bath following preboarding.

"Z" twist yarn at low tension has given satisfactory results in looping; various denier yarns including nylon hosiery yarns, as well as commercial nylon seaming threads have been used. The ends should not be clipped too close; nylon thread has more tendency to fray at this point than a staple fiber.

Nylon thread should be used in seaming nylon hose. Low thread tensions are desirable. To prevent wavy seams, a reduction of stitches per inch is suggested in seaming with nylon as compared with cotton.

The final inspection of the gray hose is a very important step. All menders, defects, hook holes, and pulled threads

CEGLIN* *Finish for Textiles*

FOR CRISP OR SOFT EFFECTS...

Properly applied, CEGLIN gives the desired degree of crispness or softness to cottons and rayons. These qualities are then an integral characteristic of the finished textile and remain so through repeated launderings. For CEGLIN is a lasting cellulose finish that is so firmly anchored to each fiber that it is fast even to kier boiling.
In addition, CEGLIN increases fabric strength and durability . . . stabilizes shrinkage and stretching . . . increases resistance to slippage, distortion and abrasion. CEGLIN can be applied before boil off. . . during mercerization . . . before or after dyeing . . . or as a final finish. It does not require curing nor ageing at high temperatures.

For additional information write for technical booklet giving complete directions on uses and application of Ceglin.

How CEGLIN *Increases the Intrinsic Value of Fabrics*

- PROVIDES A FINISH OF DISTINGUISHED CHARACTER.
- Stands up under laundering.
- Adds tensile strength.
- Stabilizes shrinkage and stretching.
- Increases resistance to slippage or distortion.
- **MAKES POSSIBLE A WIDE RANGE FROM SOFTNESS TO CRISPNESS.**
- Improves resistance to abrasion.
- Helpful in solving manufacturing problems.

***Made only by* SYLVANIA INDUSTRIAL Corporation**

Manufacturers of cellophane and other cellulose products since 1929

General Sales Office: 122 East 42nd St., New York 17, N. Y. ★ *Plant and Principal Office:* Fredericksburg, Va.

SYLVANIA TEXTILE FINISHES

* *Reg. U. S. Pat. Off.

CHICAGO WATCHCLOCKS

have been leaders in the

TEXTILE INDUSTRY

for more than 60 years

—because they have given dependable service under all conditions—year after year at an astonishingly small cost —and have kept watchmen

CONSTANTLY ON THE JOB

Sturdy 8 day movement; frictionless key action, rustproof, non - corrosive construction. Approved by Underwriters' Laboratories, Inc. and by the Associated Factory Mutuals.

Four Models—One TO FIT EVERY NEED For Complete Mill Protection

Designed and Built by the LEADING MANUFACTURERS OF WATCHCLOCK SYSTEMS FOR MORE THAN SIXTY YEARS

CHICAGO

WATCHCLOCK CORPORATION

•

1526 SO. WABASH AVE., • CHICAGO 5, ILL.
111 JOHN STREET • NEW YORK CITY
1417 W. 11th St. • LOS ANGELES, CALIF.

should be corrected at this time so they will not be "set" during preboarding. Operators should avoid clipping ends too close during this inspection.

To avoid pull-threads and snags in the gray goods, have the hands of all persons handling nylon gray fabric kept in good condition and all surfaces with which nylon stockings come in contact kept very smooth. Hand lotions for operators and cloth bags for moving gray goods have also been found useful in reducing the frequency of snags and pull-threads in knitting mills and dye houses.

Defects Caused by Mispicks

(*Continued from page 129*)

the bare wood almost certainly will cause the filling to break. Long tails at the start of winding are troublesome. Any bobbin wound too large which fits tightly in the shuttle should be rewound.

Study of the mispick will usually indicate the cause. After confirmation of the fact that the mispick does extend all the way across the fabric, it is a good bet that the fault is due either to careless weaving or a stop motion being out of order. It may be produced by the weaver failing to find the pick when the filling breaks, locking the head motion on the wrong pick, or starting the loom one pick at a time with the filling broken. When the weaver starts up one pick at a time with the shuttle on the magazine side, the blade of the temple sometimes cuts the filling.

A short broken pick at the right or magazine side of the fabric just before a filling transfer indicates either insufficient filling bunch or reserve at the start or an incorrectly set filling feeler. Even though the stop motion may be set correctly, it may not operate when the filling runs out so close to the end. To overcome this condition, loom builders have placed the filling stop motion off center and closer to the magazine side, but the results are questionable.

Surest method of overcoming this fault is to wind all bobbins with a reserve at least three times the reed width of the loom, and properly adjusting the filling feelers. Another source of short broken picks is insufficient spring tension on the filling fork. Here the filling breaks but catches on before the stop motion works.

One puzzling occurence is a continuation of broken picks when the stop motion is in perfect condition. The answer is that the loom will not stop after the knock-off arm passes by the knock-off lever. The crankshaft is at approximately bottom center, with the shuttle entering the box. In effect it is too late at this point for the stop motion to act when the filling catches or unwinds improperly. A broken pick of this sort is easy to identify because there will be loose filling at each end with a broken pick in between. The filling was catching, but when it broke it snapped back causing a broken pick.

To correct this condition, it is necessary to find what causes the filling to break. Worn binders or mouth pieces will break the filling. Other causes are shuttles throwing crooked, interference with unwinding of the filler, poor winding, and weak or tender places in the filling. Redyed yarn sometimes becomes tender in spots.

On different weaves and fabrics, mispicks show up differently. On a plain 1 up, 1 down weave, a mispick appears the same as a double pick. A mispick on 2 up, 2 down twill weave has the same appearance face and back; whereas on 2 up, 1 down twill, it will be different on the back. Basket weaves with two picks show a mispick as a light place.

Mending or sewing of mispicks is usually successful without leaving traces of imperfection in the cloth. However, fabrics such as tweeds woven with a light warp and dark filling cannot be mended without imperfections. If the mispick is sewn in, there will be a heavy place, and if the next pick is pulled out, a light place will show.

Assigning Doffer's Task

(*Continued from page 139*)

not have the same doff basis. Bobbins lifted per 40 hr. will range from 32,000 to approximately 40,000, with the latter figure generally considered as a maximum. In some cases the figure might be higher.

The task should have a time-study basis, which includes all operations accompanying actual lifting of bobbins. The latter would be a fixed standard, though determined of course from time studies. If doffers get their own bobbins and boxes, the time element consumed will decrease the number of bobbins lifted. It is therefore necessary to fix standard times for all elements of the job.

An 8-hr. time study is usually sufficient for this work, unless the mill has an unusual amount of variables. Variables which cannot be standardized must be allowed for in the standards. Synthetic yarns, for example, especially those requiring reverse, or S, twist will probably call for a lower doff basis than standard cotton yarns. In any event, the final determination will be made on the work the doffer actually does in a given unit of time.

Only actual minutes worked should be recorded in the study, and the number of bobbins lifted per hour should be calculated from these figures. Then a percentage allowance for rest should be

When There is a Choice—
Will You Be Chosen?

With the present scarcity, textile buyers can't be too selective. But when supply catches up with demand, where will you stand? One way of insuring your place among the chosen, is by continuing *now* to maintain quality in the textiles you produce. And in spite of scarcities, where quality depends on chemicals, you can obtain this insurance by using Hooker Chemicals. Dye and Textile Chemists who have been using Hooker Chemicals may have been handicapped by not being able to secure all the chemicals they wanted, but they were never handicapped by "poor quality" chemicals.

Listed below are some of the Hooker Chemicals that are being used in the dye and textile fields. If you haven't tried Hooker Chemicals yet, now is a good time to see how these quality Chemicals can make it easier for you to keep your quality up. Technical Data Sheets and samples are available when requested on your letterhead.

PRODUCT (Chemical Formula Molecular Weight)	HOOKER SPECIFICATIONS	SUGGESTED USES
Aluminum Chloride, Anhydrous $AlCl_3$; 133.3	Aluminum Chloride, min. 98.5%. Iron, max. 0.05%. Non-sublimables in air at 950°C max 1.5%.	Catalyst in synthesis of dyestuffs and intermediates.
Antimony Trichloride, Anhydrous $SbCl_3$; 228.1	Antimony Trichloride min. 99%. Iron and Arsenic, max. 1%. Lead, 0%.	Catalyst in organic synthesis; mordant in textile printing. Moisture and fire-proofing textiles.
Benzoic Acid—USP and Tech. C_6H_5COOH; 122.1	Benzoic Acid, min. 99.5%. Water, max. 0.2%.	Manufacture of dyes. Mordant.
Chlorparaffin Resin 70 $C_{24}H_{29}Cl_{21}$; 1063	Chlorine, min. 68 to 72%. Free HCl, max. 0.05%. Iron, max. 0.01%. Softening range 90° to 100°C. A brittle resin, soluble in aromatic solvents, difficultly soluble in mineral spirits.	Treating textiles to make water, fire, and mildew-proof.
Cyclohexanol (Hexahydrophenol) $C_6H_{11}OH$; 100.1	Cyclohexanol (High Grade) min. 98%. Distillation range 100%. 158° to 162°C.	Solvent for dyes. Chemical intermediate.
Ferric Chloride Solution $FeCl_3$; 162.2	$FeCl_3$ 40 to 42%. $FeCl_2$ max. 0.20%. Sp. Gr. 1.44 ± .01	Mordant in dyeing and printing textiles as oxidizing agent in making dyes.

PRODUCT (Chemical Formula Molecular Weight)	HOOKER SPECIFICATIONS	SUGGESTED USES
Lauryl Pyridinium Chloride C_5H_5N ($C_{12.6}H_{26.2}$) Cl; 292.0	Mottled tan, semi-solid. Solubility in water is 60 gms. per 100 gms. of water. Alkyl Pyridinium Chloride (Calc. as C_{12}) - min. 85.0%.	Cationic detergent. Wetting and cleaning agent for textile fibers. As a leveling agent and color modifier in dyeing.
Phosgene (Carbonyl Chloride) $COCl_2$; 98.9)	Colorless gas at ordinary temperatures. Does not discolor a 0.1% solution of KI when vigorously bubbled through solution for one minute. (Test for free chlorine).	Dye intermediate; chlorinating agent.
Sodium Sulfhydrate, Flake NaSH; 56.1	NaSH 70 to 72%. Na_2S 1 to 2%. NaCl, max. 1%. Na_2SO_3, $NaHCO_3$, max. 1%. Fe, max. 5 ppm. Cu, Ni, Cr, Mn, Pb, max. 1 ppm. Water of crystallization 28 to 26%.	Penetrating nitrocellulose; desulfurizing viscose rayon; calico printing; in sulfur dye baths.
Sodium Sulfide, Flake Na_2S; 78.1	Na_2S 60 to 62%. NaCl, max. 1.5%. Other Na Salts, max. 2.0% Fe, max. 8 ppm. Cu, Ni, Cr, Mn, Pb, max. 1 ppm. Water of crystallization 36.5 to 34.5%.	Desulfurizing viscose rayon; calico printing; in sulfur dye baths.

ARMY E NAVY

HOOKER ELECTROCHEMICAL COMPANY

4 Forty-seventh St. Niagara Falls, New York

New York, N. Y. • Wilmington, Calif. • Tacoma, Wash.

HOOKER CHEMICALS

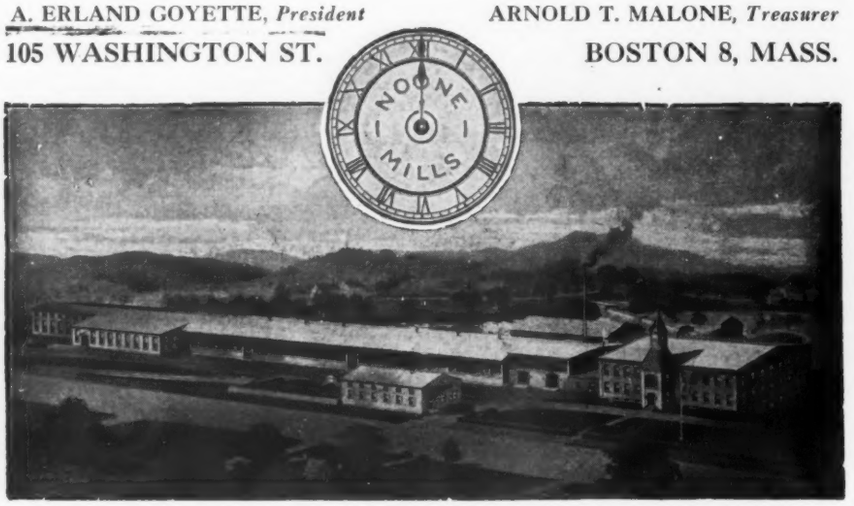
8413

Chlorine **Caustic Soda** **Muriatic Acid** **Ferric Chloride** **Paradichlorbenzene**

William R. Noone & Company

A. ERLAND GOYETTE, *President* — ARNOLD T. MALONE, *Treasurer*

105 WASHINGTON ST. — BOSTON 8, MASS.



Established 1831

Noone's Standard Slasher Cloths

Ask for **NOONE'S SLASHER CLOTHS** by name or style number.

Long experience in manufacturing Slasher Cloths and continuous experimenting have enabled us to produce several types of Slasher Cloth, each especially constructed to give best results on the particular kind of yarn to be sized.

The proper Slasher Cloth for each type of yarn means properly sized warps, less loom stops, easier weaving, more and better production, *and lower cost.* We can supply you the right cloth for your particular work.

On request we will have our representative call and discuss Slasher Cloths with you.

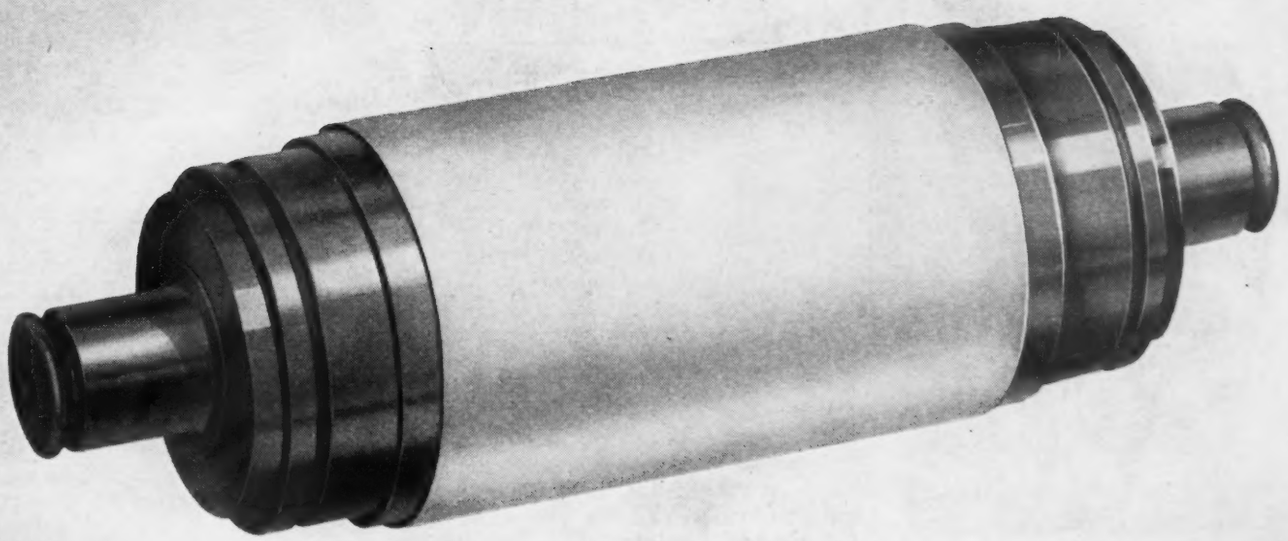
We are the oldest manufacturers of Slasher Cloth in America. Our experience enables us to build a Slasher Cloth that will meet your most particular demand. Use **NOONE'S SLASHER CLOTHS** and be convinced.

Sole Agents for

The Joseph Noone's Sons Company

PETERBOROUGH - - - - - - - - - - NEW HAMPSHIRE

Use Noone's Roller Cloths, Noone's Slasher Cloths, Noone's Clearer Cloths

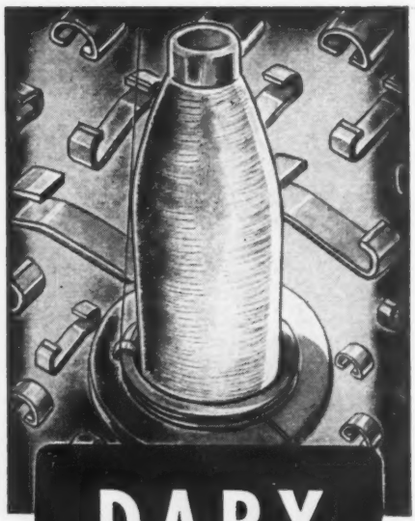


Perkins Calender Rolls are the natural result of the longest and broadest experience in this highly specialized industry.

B.F. PERKINS & SON, INC.

ENGINEERS AND MANUFACTURERS

HOLYOKE, MASSACHUSETTS



DARY

RING TRAVELERS

The Spinner Knows..

Yes, the spinner that uses superior Dary Ring Travelers knows that he is certain of superior performance . . . certain of consistent uniformity and wearability that will permit higher spindle speeds.

This spinner knows also that there is a Dary Ring Traveler for all cotton, wool, worsted, silk and rayon yarns and that his Dary representative stands ready always to help him work out any spinning or twisting traveler problem that arises.

Join Dary's family of satisfied spinners . . . a family with members in many of the country's finest Textile Mills.

Ask to see your Dary representative today!

DARY

★ PROCESSED ★

SYMBOL OF SUPERIORITY

The DARY RING TRAVELER CO.

TAUNTON, MASSACHUSETTS

JOHN E. HUMPHRIES, BOX 843, GREENVILLE, S. C.

JOHN H. O'NEIL, BOX 720, ATLANTA, GA.

H. REID LOCKMAN, BOX 515, SPARTANBURG, S. C.

made, reducing the number of bobbins lifted, Fig. 2.

The basis of 800 bobbins lifted per hour, Fig. 1, includes a rest allowance of 10%. Of course, the percentage used by a mill will have to be worked out for local conditions.

Control of pH

(*Continued from page 127*)

in this process, the first difficulty which had to be overcome was the variation from batch to batch. The chief variables in the process were: (1) The pH of the bath; (2) temperature; (3) goods to liquor ratio; (4) concentration of available chlorine; (5) the treatment of the wool prior to processing.

The one variable difficult to stabilize was the pH or hydrogen-ion concentration of the bath. It was a simple matter to adjust the pH to any desired value, but when the wool was entered, the pH suddenly dropped. This was due to the hypochlorous acid being reduced by the wool to form hydrochloric acid, which is a much more highly dissociated acid, giving rise to a much lower pH.

NEGAFEL PROCESS. The Negafel process, invented by Clayton and Edwards in England, ovecame this difficulty to a large extent. In this process, formic acid was substituted for hydrochloric acid. When sodium hypochlorite is acidified with formic acid, three reactions take place; two of neutralization, and the other of oxidation of the formic acid, viz.:

$$NaOCl + HCOOH \longrightarrow HOCl + HCOONa$$
$$HOCl + HCOOH \longrightarrow HCl + H_2O + CO_2$$
$$HCl + HCOONa \longrightarrow NaCL + HCOOH$$

When the wool is entered, any hydrochloric acid produced is immediately converted into formic acid. The concentration of formic acid does not greatly increase, however, because it is being constantly used up by oxidation to carbon dioxide and water. If the pH of the batch is about 4.0 at the start and the temperature between 5° and 10° C., the pH seldom drops below 3.5 throughout the treatment. This process is being used widely and successfully in England today. In standardizing the treatment of the wool before chlorination, the Negafel treatment is carried out by entering the wool dry. This innovation gives remarkable results.

Clayton and Edwards, the patentees of the process, recognized the necessity of eliminating prior swelling of the wool fiber. Referring to the drawbacks of the older method, this process largely overcame variations from batch to batch, uneven dyeing, liberation of chlorine gas, and the harsh handle. Entering the goods dry also decreased the chemical damage and loss of weight.

The method, however, introduced another problem. The interaction between formic and hypochlorous acids produced an instability in the concentration of available chlorine. The speed of this reaction is directly proportional to the available chlorine and the temperature and inversely proportional to the pH. When working at temperatures of over 10° C. the loss in available chlorine is considerable.

AUSTRALIAN PROCESS. In Australia, a process was developed which successfully overcame the foregoing difficulty. In this method, sodium salts of phosphoric acid were used. It was found that hypochlorite solutions could be buffered at pH 5.5 where practically no change took place in the pH of the bath during the whole treatment. There was no change in the concentration of available chlorine, for hypochlorous acid does not react with phosphoric acid or its salts under the conditions of the process. To obtain a mild reducing effect, small quantities of formaldehyde were added to the bath. This proved, over long commercial use, to reduce the loss in weight. The reduction of hypochlorous acid by formaldehyde is slower than by formic acid and also can be controlled, for additions are independent of the pH. This method increased the efficiency of control over the process; and, with the increased stability, it was practical to carry out the treatment at temperatures up to 20° C.

One major defect of the old method of wet chlorination still left to be overcome was the yellow discoloration which neither of these newer processes had eliminated. Work was then carried out to investigate the phosphoric-acid method over a wide range of pH values. It was found that at low pH values of under 3.0, little discoloration took place. The discoloration gradually increased for pH values up to 7.0, with a rapid increase between 7.0 and 8.5, where the wool became almost brown in color. Over 8.5 a sudden change took place, so that practically no discoloration was obtained; and at pH 10.0 the wool was actually whiter than natural wool. However, on testing, it was found that although the available chlorine was taken up by the wool, its effect on the felting properties was practically nil. Working back on the acid side, it was found that, if the wool was chlorinated at pH 5.5 and after exhaustion sulphuric acid was added to the batch to reduce the pH value below 2.0, the wool was much whiter after antichloring than if this lowering of pH had not been carried out. In effect, wool could be chlorinated at pH 5.5 with the advantages of evenness, lack of chlorine fumes, etc.; and then if the bath should be reduced to pH less than 2.0 before antichloring, the advantage in non-discoloration, when chlorinating at a low pH, could also be attained.

For a filament acetate size with HIGH LOOM EFFICIENCY

Try CETASIZE

This high quality protein powder also offers these 6 ADDITIONAL ADVANTAGES

1. Complete uniform product.
2. Size easily removed.
3. Runs clean on the machine—no foam.
4. No softeners required.
5. Easily prepared.
6. Replaces other sizing materials which may be difficult to obtain.

An increasing number of plants are enjoying these values in their regular production. Whether you're weaving rayon now or planning to weave it, prove for yourself that CETASIZE is the answer to your filament acetate warp sizing problem.

ORDER A SAMPLE TODAY—
AND ASK FOR A DEMONSTRATION

OUR LINE OF TEXTILE STARCHES GUMS, DEXTRINES AND SPECIALTY MATERIALS ALSO INCLUDES:

•

W GUM D and VICTORY K2W GUM
For sizing staple synthetic yarns and blends.

RTF GUM
For laundry resistant finishes.

KAC No. 4 with B2 or SUSSEX GUM
For use in Printing . . . higher color yield.

96R and VELVEEN XX
For sizing cotton.

RTC GUM
For sanforizing and weighting.

CETOSOL SF
For starchless finishes.

SHO-PAL THICKENER and BINDER
For pigment printing and pigment dyeing in water dispersions . . . excellent wash fastness.

80 YEARS OF SERVICE TO THE TEXTILE INDUSTRY

STEIN SH HALL

285 MADISON AVENUE NEW YORK 17, N. Y.

1011 JOHNSTON BLDG., CHARLOTTE 2, NORTH CAROLINA
210 GROSVENOR BLDG., PROVIDENCE 1, RHODE ISLAND
250 VAN HORN STREET, TORONTO, CANADA

EST. 1866

OFFICES IN OTHER PRINCIPAL UNITED STATES CITIES
LABORATORIES AT NEW YORK, CHARLOTTE, PROVIDENCE, CHICAGO

A TEXTILE STARCH FOR EVERY TEXTILE PURPOSE

A MESSAGE TO THE TEXTILE INDUSTRY

10 BIG ADVANTAGES OFFERED INDUSTRY IN THE "UNION PACIFIC WEST"

1. AVAILABILITY OF RAW MATERIALS
2. ADEQUATE SOURCES OF POWER
3. OPPORTUNITY FOR DECENTRALIZATION
4. NON-RESTRICTIVE LEGISLATION
5. LARGELY NATIVE-BORN LABOR AVAILABLE
6. HEALTHY LIVING CONDITIONS
7. GOOD SCHOOLS
8. GROWING CONSUMER MARKETS
9. INCREASING INDUSTRIAL DEVELOPMENT
10. FAVORABLE DISTRIBUTION FACILITIES*

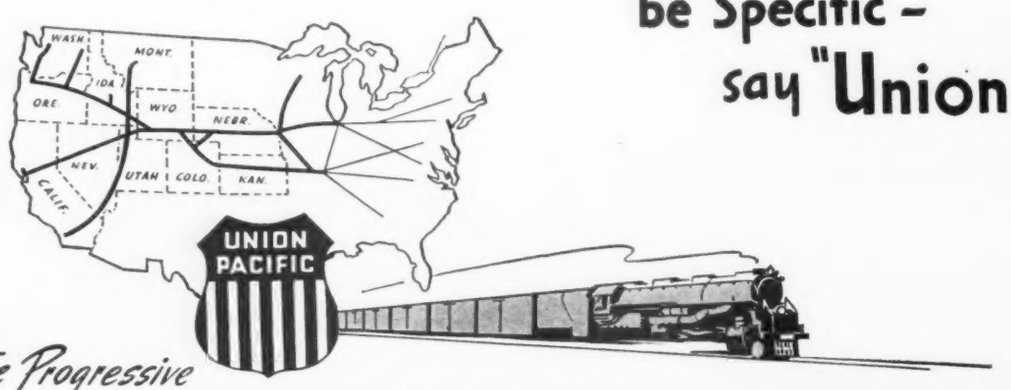
*

Union Pacific—the Strategic Middle Route—unites the East with the Mid-West, Intermountain and Pacific Coast states.

It has facilities and equipment designed to meet industry's heaviest demands. Trained traffic men offer a helpful, cooperative service to all shippers.

For information regarding western industrial sites, write W. H. HULSIZER, General Manager of Properties, Department 101, Union Pacific Railroad, Omaha 2, Nebraska.

be Specific – say "Union Pacific"



The Progressive

UNION PACIFIC RAILROAD

The Strategic Middle Route

EDMOS KNITTING MACHINES

World's Fastest Producer of Jersey Fabrics

SEEING IS BELIEVING

Edmos Features:

(1) More feeds per diameter inch than any other sinker top machine.

(2) Modern design frame completely enclosing all moving shafts, gears, belts, etc.

(3) Built in drive including clutch, pulley, free wheeling, stop control.

(4) Self-adjusting take up.

(5) Adjustable motor bracket

(6) New type lifetime inserted wall cylinder.

(7) New system of cams and stitch adjuster.

To see the fastest producer of jersey fabrics in the world in operation is worth the time it takes so just phone or write for an appointment.

Built in three sizes

18" — 64 feeds — 16 to 24 cut

20" — 72 feeds — 16 to 24 cut

24" — 84 feeds — 16 to 24 cut

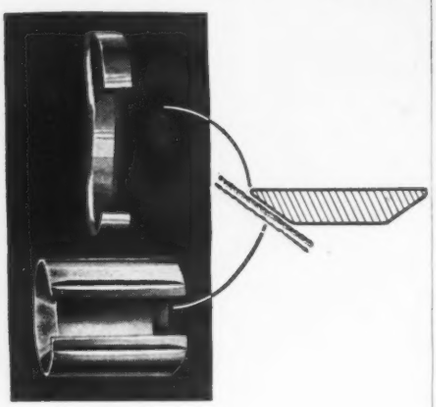
Sizes from 10" up at a later date

EDMOS PRODUCTS CORPORATION

13 Christopher Avenue · Brooklyn 12, N.Y.

Bevel Edge

ANTI-FRICTION TRAVELERS
EXCLUSIVE "U. S." DESIGN



"Naturally smoother running"

The bevel parallels the natural path of the yarn — hence you get smoother running at a critical point in the spinning and twisting processes. A summary of the remarks from users indicates these advantages:

1. **Less loading up of travelers on cotton.**
2. **Less fly waste on woolen.**
3. **Minimizes split ends on rayon, and silk.**
4. **Much lower end breakage —frequently 8 to 10 fewer per hour.**
5. **More uniform tension — more uniform yarn.**

U. S. Travelers are made and stocked in ALL styles.

DEPENDABLE DELIVERY—
PROMPT SERVICE CALLS

U. S. RING TRAVELER CO.
AMOS M. BOWEN, President & Treasurer
Providence, Rhode Island

"U. S." Men give you Prompt Service!

W. P. VAUGHAN—W. H. ROSE—Greenville, S. C.—Box 792—Phone 3031
O. B. LAND—Athens, Georgia—Box 1187—Phone 478
T. L. MAYNARD—Belmont, N. C.—Box 456—Phone 115
M. L. BOLTON—West Philadelphia—Box 7234—Trinity 1438
H. R. FISHER—Concord, N. C.—Box 83—Phone 8988
C. W. SMITH—H. J. SMITH—L. H. MELLOR, JR.—Providence—Gaspee 0100

News of the month

ACMA Meeting. The American Cotton Manufacturers Association sesquicentennial meeting held in Pinehurst last month was rated one of the best attended as well as one of the most aggressive. Better public relations, more intelligent regulation, and ascertaining true facts concerning the industry were among the subjects thoroughly discussed by speakers. W. S. Montgomery was elected president to succeed Charles A. Cannon.

Avondale Profit Sharing at New High. During Avondale Mills' 25th annual inspection tour last month, announcement was made that employee's profit sharing reached 19%, a new monthly high. The tour was well attended by plant officials, other personnel, suppliers, local and state government officials, and other friends. It was obvious that the mills were continuing their modernization programs, to a large extent along lines of materials handling, and employee facilities, such as for health, recreation, and education. Reputedly the first industrial cancer clinic was held at Avondale's Drummond Fraser hospital in Sylacauga, Ala.

LIGHTEST WEIGHT WOOLEN FABRICS in the world were recently exhibited in London—the finest of which weighed 1 oz. per sq. yd. and the heaviest only 3½ oz. These superfine woolens were shown by Silkella Ltd., under the auspices of the International Wool Secretariat. In these fabrics, a soluble carrier is used to strengthen a worsted yarn so fine that alone it would not stand the strain of normal weaving. This carrier is made of alginate, the basis of which is ordinary seaweed. It is later dissolved away, leaving behind the light fabric in pure wool.

Cotton Week Successful. Reports from the leading shopping centers disclosed that National Cotton Week this year was observed more widely than at any time since 1939, according to the Cotton-Textile Institute. Despite shortages of many essential cottons, stores did their utmost to dramatize the versatility of cotton products and large numbers managed to arrange colorful presentations of men's and women's apparel and high-style piece goods.

"Azlon" for Protein Fibers? Establishment of a generic name for man-made protein base fibers, used principally in men's and women's clothing and other textile products, was considered at a recent trade practice conference of the Federal Trade Commission under the supervision of Commissioner Lowell B. Mason. Prior to the war protein base fibers were produced commercially in several foreign countries under the names of "Lanital" in Italy; "Casolana" in Holland; "Polan" in Poland; "Tiolan" in Germany; "Cargan" in Belgium; and "Courtaulds Casein" in England. In this country there is Aralac among others. Possible ASTM's Azlon will be accepted as the generic name.

Rayon Output a New High. Domestic rayon production for the first three months of 1946 reached the unprecedented level of 212,800,000 lb., thereby exceeding last year's fourth quarter output by 4% and first quarter 1945 by 10%. Each division of the rayon yarn and staple fiber producing industry attained new record levels. First quarter

Textile Calendar

Chicago Yarn Men's Club, 25th anniversary banquet, Stevens Hotel, Chicago, June 25, 1946; 22nd golf tournament, Barrington Hills Country Club, Barrington, Ill., June 26, 1946.

Philadelphia Textile Manufacturers Association, annual outing, Manufacturers Golf & Country Club, Oreland, Pa., June 28, 1946.

First Annual National Textile Seminar, under auspices of Philadelphia Textile Institute by invitation, Hershey, Pa., July 8 to 13, 1946.

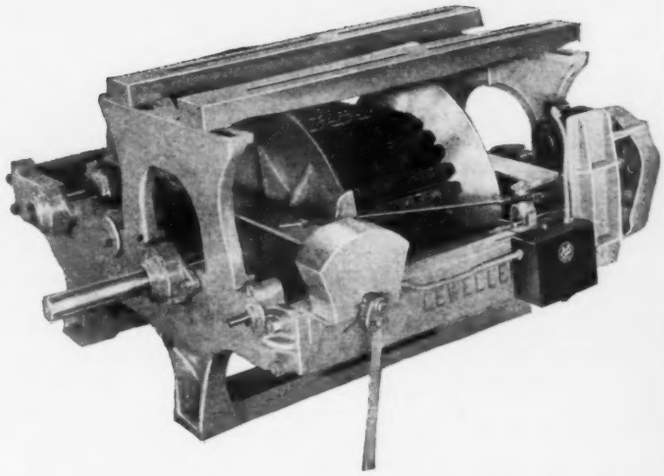
Seventh Cotton Research Congress, Dallas, Tex., July 8 and 9, 1946.

Association of Hosiery Mill Salesmen, annual outing, Crestmont Golf Club, West Orange, N. J., July 16, 1946.

Southern Conference on Human Relations in Industry, Blue Ridge, N. C., July 18 to 20, 1946.

Fourth National Chemical Exposition, Chicago Coliseum, Chicago, Sept. 10 to 14, 1946.

Southern Hosiery Manufacturers Association, annual meeting, Grove Park Inn, Asheville, N. C., Oct. 17 to 19, 1946.



Name your speed-control problem . . . chances are Lewellen has the answer!

● Illustrated above is one of hundreds of special applications of Lewellen Variable-Speed Transmissions.

Here a Lewellen automatically controls a veneer lathe and maintains a constant cutting speed at the knife. The control is connected to the knife table. As the knife advances toward the core of the log, the lathe speed is increased automatically to maintain constant cutting speed. When the knife is backed out to take a new log, the control will operate the spindle at the correct speed for the diameter of the log.

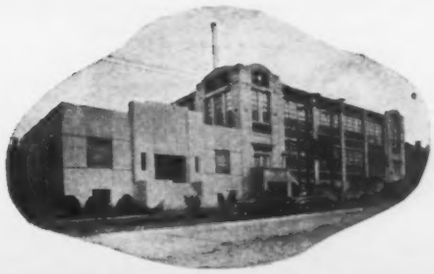
Look to the pioneer in speed-control engineering for the solution of your problem—look to Lewellen! Back of each Lewellen Variable-Speed Transmission and Motor Pulley is more than 45 years experience in speed-control engineering. Wire, phone or write today for complete information about our services. We want to help you!

LEWELLEN MANUFACTURING COMPANY, COLUMBUS, INDIANA

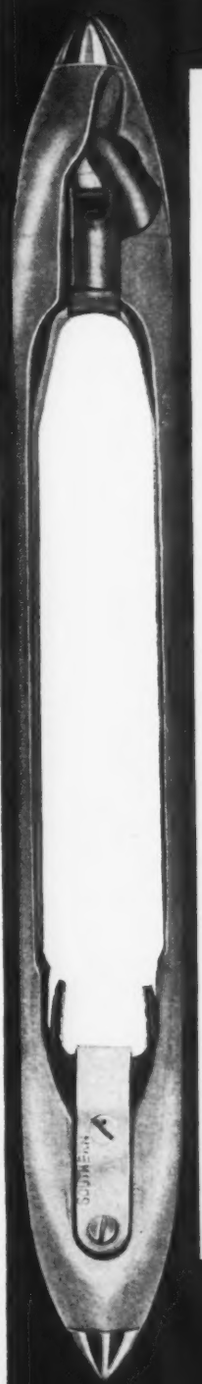
LEWELLEN

Variable Speed { TRANSMISSIONS / MOTOR PULLEYS

★ Lewellen knows speed control



The Source of Southern's
Scientifically Engineered Shuttles



A fine modern plant
with precision machinery,
tools and equipment
in the hands of
skilled craftsmen

makes the

Quality
Efficiency
Dependability

You buy in Southern

It's no secret!

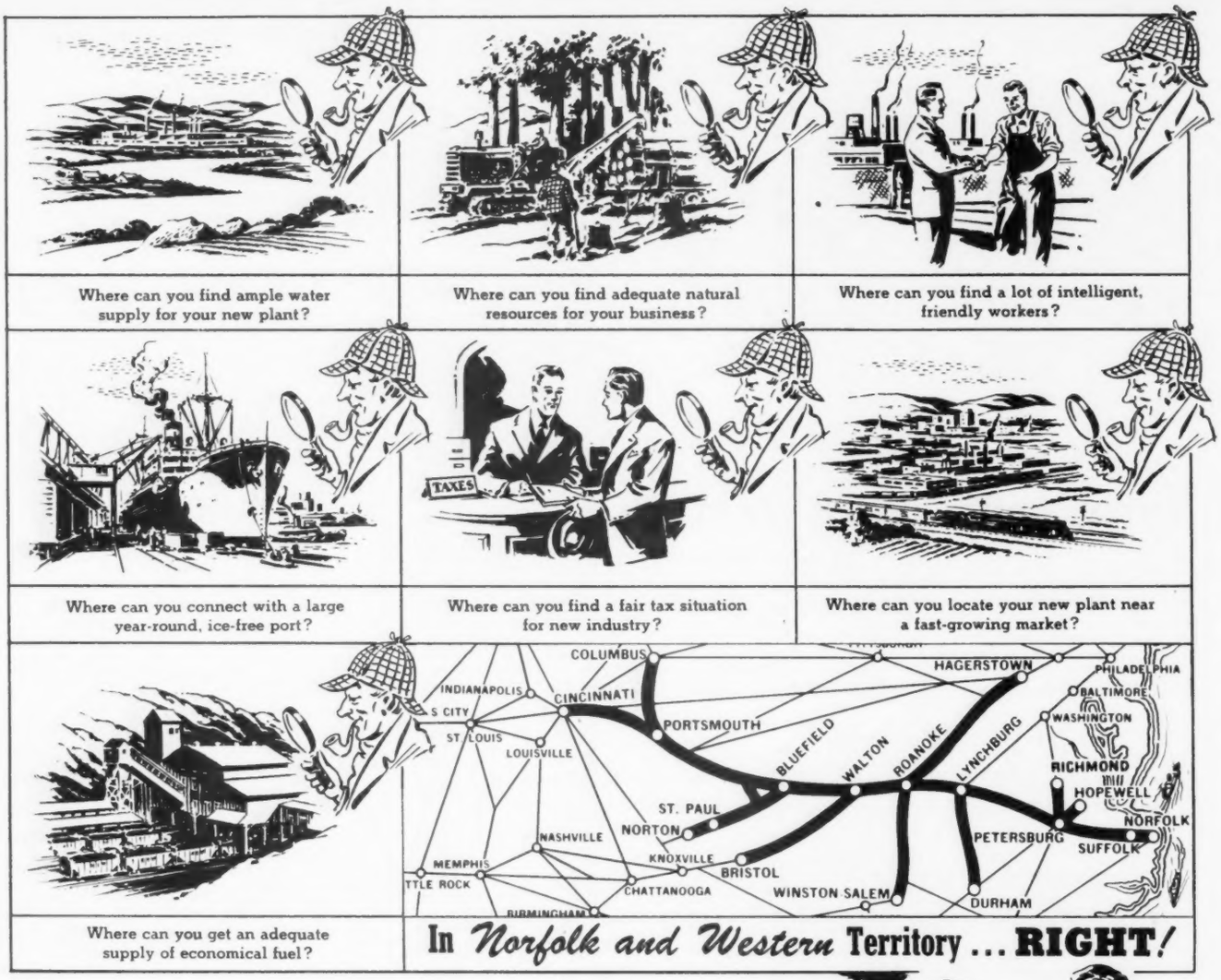
Our experienced shuttle engineers can show you or write for catalogue No. E-45-A

Southern Shuttles Division
Steel Heddle Mfg. Co.
Greenville, S. C.

Philadelphia
2100 West Allegheny

Woonsocket, R. I.
P. O. Drawer 214

Montreal, Canada
6259 Notre Dame St.



"DETECT AND COLLECT"

(With apologies to the B. F. Goodrich radio program "Detect and Collect." Title used by special permission.)

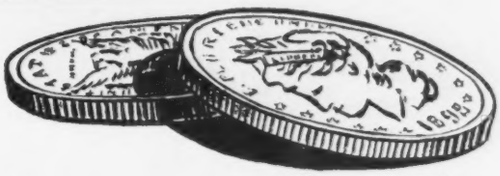
You don't have to affect a Sherlock Holmes hat and peer through a magnifying glass to find the winning answers to questions concerning better plant locations. Reflect on the advantages of the six-state territory served by Norfolk and Western — mild climate, abundant power and natural resources, intelligent and friendly workers, easy access to the national market and direct connections with expanding foreign markets through the great year-round, ice-free Port of Norfolk. Weigh the advantages. Detect and collect. Locate in N. and W. territory.

N. and W. industrial planning specialists will be glad to help you select the site which is perfect for your project. Write to Industrial and Agricultural Department, Norfolk and Western Railway, Roanoke 17, Va.

Norfolk and Western RAILWAY

FOR BETTER PLANT LOCATIONS

Think of your Production on a dollar basis ..and then **DOUBLE IT**



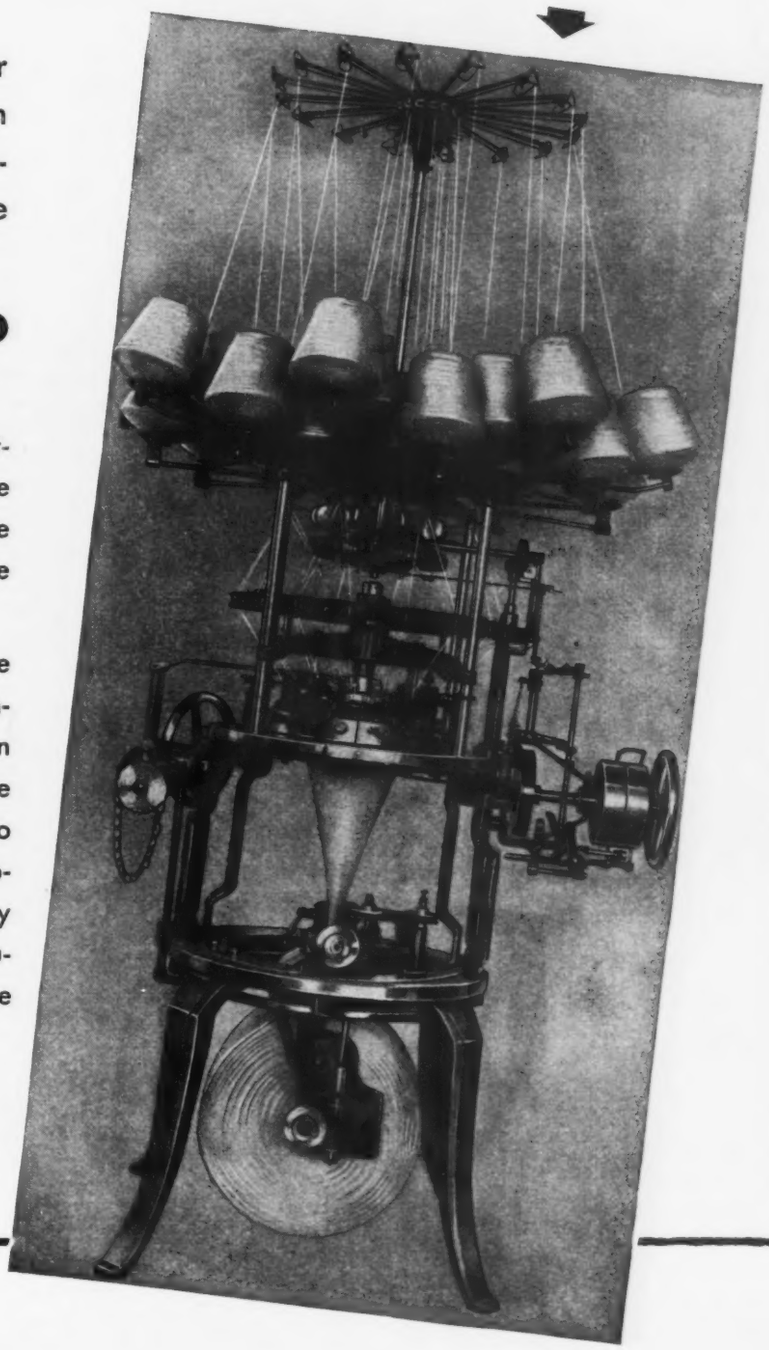
With this modern machine!

and you can leave out of your calculations any consideration of additional floor space; because, believe it or not, the

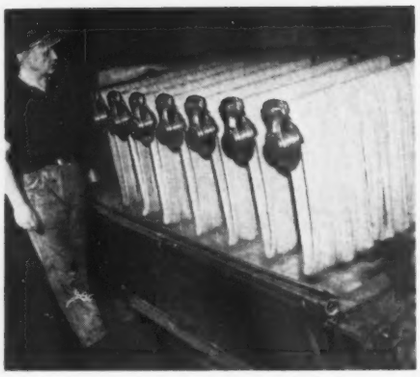
WILDMAN MULTIPLE-FEED RIB MACHINE

will *double your Production or better*—on exactly the same floor space as an old-fashioned 8-feed machine occupies—and use only a third more power.

Can you think of anything else that will step up your volume so simply, so easily? You need this modern machine in your plant to meet the growing consumer demand and to withstand the stiff competition of tomorrow. Send for details of its many operational advantages and exclusive features. It's the machine of the hour!



WILDMAN MFG. CO.
Norristown, Pa.



A Comprehensive

YARN DYEING SERVICE

Globe affords full dyeing service for modern yarns and their combinations.

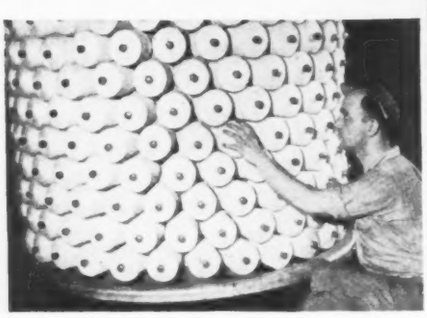
Included are skein and warp dyeing yarns dyed on cotton, rayon, nylon, aralac, and other synthetic yarns, and their combinations.

Also package dyeing of cotton and blend yarns on tubes.

1865 1946

Globe DYE WORKS CO.

Frankford, Phila. 24, Pa.



rayon filament yarn production aggregated 169,100,000 lb. and rayon staple fiber output totaled 43,700,000 lb.

New Site for P.T.I. The Philadelphia Textile Institute Foundation has purchased 12½ acres at School House Lane and Henry Ave., Germantown, as the site for the proposed new Philadelphia Textile Institute. The plan involves a modern school building, dormitories, and a sports field. It is said that the plot of ground cost about $100,000. Col. Millard D. Brown is president of the foundation.

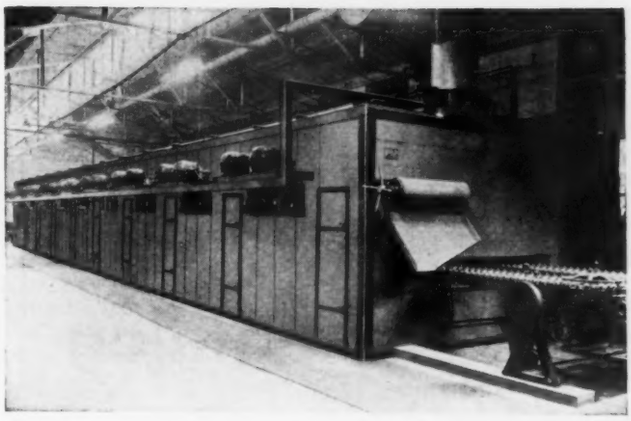
Bradford-Durfee Change. The name of the Bradford Durfee Textile School has been changed to the Bradford Durfee Technical Institute. The Institute gives three-year integrated curricula on the college level in the fields of engineering, science, and textiles. Dr. John B. Lyons has been made head of the Science Department.

Georgia Men Meet and Elect. Cotton Manufacturers Association of Georgia held its 46th annual meeting at General Oglethorpe Hotel, Savannah, Ga., early in May. Some 400 members and visitors registered. Principal speaker at the banquet was James D. Arrington, editor and publisher, the *Collins News-Commercial*, Collins, Miss. A. Sidney Camp, member of Congress, in addressing the group, deplored the alarming "socialistic trend in government" and warned that "government-fixed wages and prices are not in accord with the American way of life and will not work in a free economy." He said the high cost of government today was "most alarming" and that the most important duty of Congress was to balance the budget. A. Illges, vice-president and treasurer of the Swift Spinning Mills of Columbus and president of the association, flayed OPA for artifically created price ceilings which very naturally drive from the market goods which cannot be manufactured at a profit under those ceilings. Newly elected officers are: president, A. B. Edge, Jr., president Callaway Mills, LaGrange; vice-president, Charles C. Hertwig, vice-president and treasurer, Bibb Mfg. Co., Macon; treasurer, R. Donald Harvey, manager Pepperell Mfg. Co., Lindale; executive vice-president, T. M. Forbes, Atlanta; secretary, Frank Carter, Atlanta; traffic manager, R. L. Murphy, Atlanta.

Tufted Textile Meeting. The romance of a $100,000,000 industry based on the original handicraft production of a tufted bedspread by Mrs. Katherine Evans Whitener, of Dalton, Ga., in 1895, was stressed at the first annual convention of the Tufted Textile Manufacturers Association at Lookout Mountain, Ga., May 31. Dr. C. T. Muchison, president of the Cotton-Textile Institute, spoke. He pointed out that "the most dangerous cloud on the economic horizon today is the philosophy of scarcity and the procedures which are being followed by government to nourish this philosophy and give it the appearance of reality."

Jap Silk Is Coming Back. With almost 85% of silk reeling facilities destroyed, and mulberry acreage reduced by wartime food demands, the Japanese are making strong efforts to rebuild what once was an important export industry. American importers are said to want

AT THE GEORGIA MANUFACTURERS' MEETING: Mill executives at speakers' table, seated (left to right) A. B. Edge, Jr., president, Callaway Mills, La Grange, Ga., newly elected president of Cotton Manufacturers Association of Georgia; A. Illges, vice president, Swift Spinning Mills, Columbus, retiring president of association; A. Sidney Camp, U. S. Congressman, 4th district of Georgia; standing (left) Comer Jennings, president, Cowikee Mills, Inc., Eufala, Ala.; (right) Hatton Lovejoy, of La Grange.



"NATIONAL" SR-4 TENTER HOUSING

. . . Provides Greater Drying Capacity at Lower Cost!

Greater drying capacity per lineal foot of frame makes the cost of drying *much less*, in this newest "NATIONAL" Tenter Housing . . . designed especially for the high-speed frames now available.

Design and construction of the SR-4 are based on the principle of *plenty of air horsepower* and its efficient conversion into *maximum drying capacity*. Sure, it costs a little more to run . . . look at that motor line-up; but it is the *result* cost that counts . . . and customer records prove *important savings* in the cost per yard of goods dried.

Other features of the "NATIONAL" SR-4 include a continuous filter screen that removes all lint from the circulating air; a lower ceiling, allowing approximately 10' headroom; greater accessibility . . . two doors to each section, one on either side, and a full-length aisle along the fan side.

Send for our representative who will give you complete information on the SR-4 and other "NATIONAL" machines and equipment. No obligation, of course.

★ ★ ★

NATIONAL

THE NATIONAL DRYING MACHINERY CO.

WEST LEHIGH AVE. & HANCOCK ST., PHILADELPHIA 33, PA.

New England Agent: C. H. INGALLS — Providence, R. I.

Unchecked loss from oil spots cuts deeply into production. 7 out of 10 mills avoid this loss by using NON-FLUID OIL — the dripless, wasteless lubricant — in addition get dependable lubrication that protects machines and keeps up steady operation.

Besides saving its own cost many times over by preventing oil damage — NON-FLUID OIL also saves on lubricant and application cost. Tests prove that NON-FLUID OIL lasts 3 to 5 times longer than ordinary oil and need be applied less often than other lubricants. Send for instructive bulletin.

Southern District Manager
FALLS L. THOMASON, Charlotte, N. C.
WORKS: Newark, N. J.

WAREHOUSES:
Atlanta Ga. — Greenville, S. C. — Charlotte, N. C. — Providence, R. I. — Chicago, Ill. — St. Louis, Mo. — Detroit, Mich.

50 YEARS OF LUBRICATION SERVICE TO INDUSTRY — NON-FLUID OIL — NEW YORK AND NEW JERSEY LUBRICANT CO. — 1896-1946

NEW YORK & NEW JERSEY LUBRICANT CO.

292 MADISON AVENUE, NEW YORK 17, N.Y

Look It Up First

in the

Textile World Yearbook and Catalog

In the Catalog Sections . . .

Whenever you need details on equipment or supplies . . . whenever you need information on companies or products . . . "look it up first" in your Textile World Yearbook and Catalog . . . the blue-book with the orange bands.

In this one *complete* volume you will find a Classified Directory of Manufacturers of Textile Machinery, Equipment and Supplies . . . everything from "Adjustors, harness" to "Wringers" . . . a Classified Directory of Manufacturers of Textile Dyestuffs and Chemicals . . . complete from "Accelerators, rubber" to "Zinc Sulphoxylate Formaldehyde"; and almost 300 pages of manufacturers' catalogs giving detailed buying data about their products.

Whatever you need in the day's work . . . whenever you need it . . . "look it up first" in the Textile World Yearbook and Catalog.

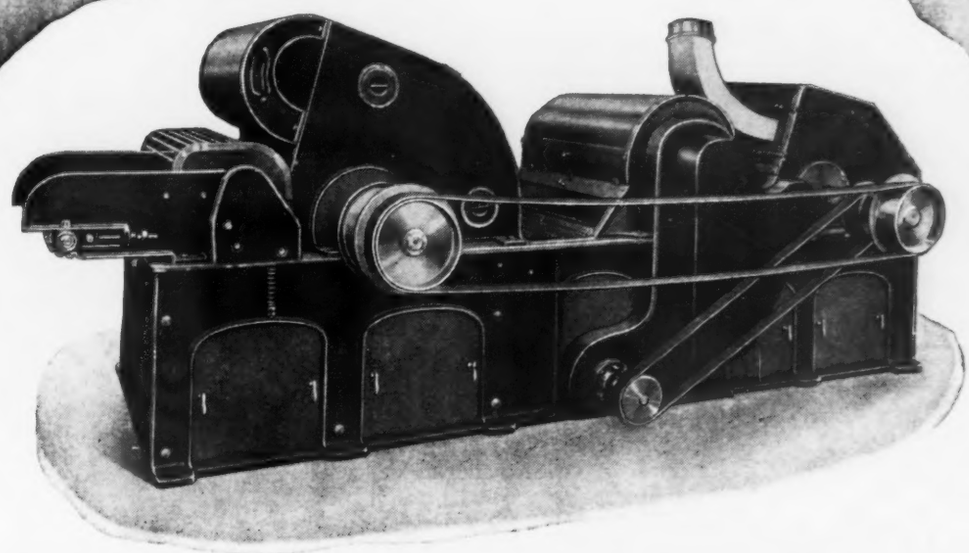
In the Data Section . . .

Whenever you need technical information about mill operation or maintenance, whether it be *general data* applicable to all textile mills, or *specific* data for the guidance of cotton men; wool men; silk men; rayon men; weavers; spinners; knitters; dyers; bleachers; or finishers; you will find the answers in the 88 pages of Mill Reference Data in the Textile World Yearbook and Catalog.

Whatever your problem, "look it up first" in this authoritative compilation of useful data which is now in its 23rd year of service to the textile industry and which is presented for your convenience by the editors of Textile World.

"The Bluebook with the Orange Bands"

BRITISH TEXTILE MACHINERY



DOUBLE CYLINDER EXTENDED GRID AREA PORCUPINE OPENER

Modern Single Process Blowrooms are completely automatic and are electrically controlled. The machines comprising any particular installation vary according to the operating conditions and the cottons to be dealt with. Perfect blending is achieved by the use of two or four Blending Hoppers, and completely effective cleaning and opening is accomplished without damage to staple by employing the requisite number of major cleaning points for the particular cottons to be processed.

Double Cylinder Extended Grid Area Porcupine Opener. The machine is also made with three Porcupine Cylinders for treating particularly low grade cottons.

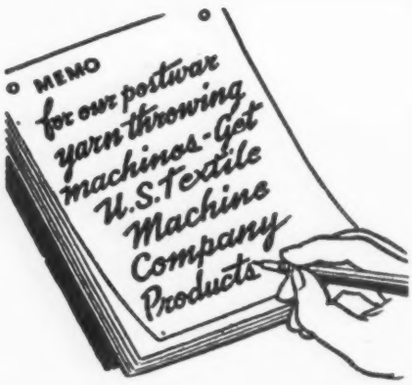
Cotton and Rayon Staple blends can be processed on Platt's Cotton Preparation and Spinning Machinery with relatively minor modifications.

PLATT'S BULLETIN — post-war issue now ready. Early application for your copy is advisable.

PLATT BROS
& COMPANY LIMITED
CENTRAL SALES DEPT.
OLDHAM ENGLAND
marketing the products of .. ..

PLATT BROS & CO. LTD.
HOWARD & BULLOUGH LTD.
DOBSON & BARLOW LTD.
BROOKS & DOXEY LTD.
ASA LEES & CO. LTD.

BTM/2.



It's as simple as that—you can start now to put your postwar plans into effect. Technological advancement of our postwar machines has been revolutionary. Increased production, superior throwing and reduced up-keep because of new materials of construction and ultra engineering design. Act now. *Consider these Products.*

U. S. ACME TWISTERS for spool or headless package

U. S. JUMBO FACE DRIVE TWISTERS for large headless package work

U. S. ACME DOUBLER TWISTERS, large package

U. S. REDRAWS and SPOILERS

U. S. TEXTILE MACHINE CO.

SCRANTON 8, PENNSYLVANIA, U. S. A.

LeaTex

The name that means leadership in

CHEMICAL SPECIALTIES

for the

TEXTILE INDUSTRY

"Always Reliable"

LEATEX CHEMICAL COMPANY
2722 N. HANCOCK ST., PHILADELPHIA, PA.

approximately 10,000 bales of raw silk a month, but on the basis of latest figures prepared by the Japan Raw Silk Bureau probable production for the current silk year will be approximately 74,896 bales and for the next 12 months 155,430 bales. If 75% is of export grade, only 116,000 bales will be available and from this must be deducted possible purchases by Great Britain, Australia, and Belgium.

Wool Overseers Set Up Guilds. Among the members of the National Association of Woolen & Worsted Overseers, a grouping by mill departments is taking place. The Carders Guild is already doing constructive work, according to reports at the association's semi-annual meeting at Warwick, R. I., on May 18. Other departments were urged to do likewise. Despite the railroad strike, there was large attendance. Forty-six new applications for membership were received. It was proposed that the superintendent, overseer, or designer must have had that rating for three years before being admitted to membership. It was also proposed that the president of the association be made eligible to succeed himself for another term if receiving a majority vote.

Shenandoah Valley Meeting. Dyehouse problems were discussed by Harry Clapham, technical advisor of E. I. du Pont de Nemours & Co., before the annual meeting of the Shenandoah Valley Textile Executives Association at Royal Hotel, Front Royal, Va., May 18. Charles M. Howard, the Dunn Woolen Co., was elected president to succeed John H. Fisher, of Virginia Woolen Co. C. S. Lemon, of Berkeley Woolen Co., was elected first vice president; Richard Petrie, of Virginia Woolen Co., second vice president; Robert B. Dechert, of Winchester Woolen Co., treasurer, and Alongo Puffinberger of Dunn Woolen Co., secretary.

Lowell Alumni. At a banquet in Boston last month the Alumni Association of Lowell Textile Institute honored former institute-president Charles H. Eames and retiring bursar Walter B. Holt; elected J. Milton Washburn to succeed Carl D. Brandt as association president; made A. Chester Clifford, vice president; re-elected A. Edwin Wells, secretary-treasurer; and listened to a progress report by Kenneth R. Fox, new institute president.

Shows Bonded Fiber. Riverside & Dan River Cotton Mills exhibited its fiber bonded processes at the National Plastics Exposition, New York, Apr. 22 to 27. Gimbel Bros. department store, Philadelphia, repeated the exhibit later.

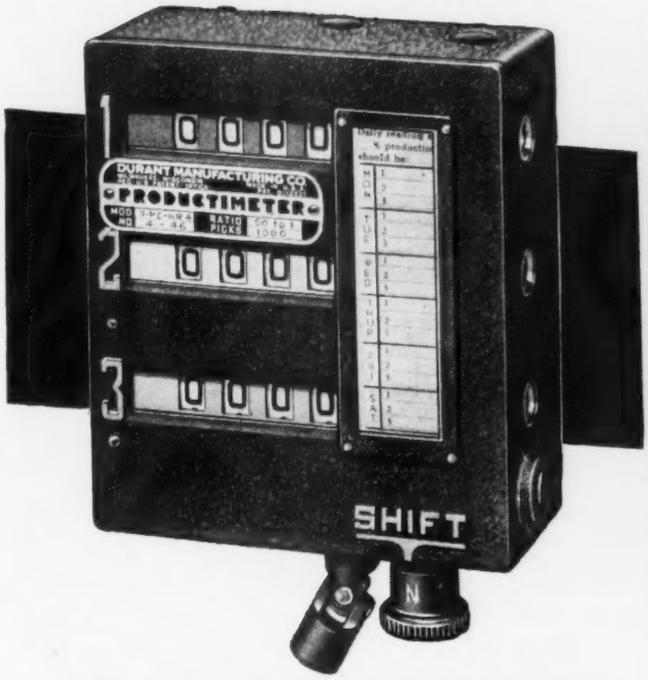
Rayon Seminar. A week-long "Advanced Seminar on Rayon" for deans and instructors from eight of the country's leading textile schools began June 3 at American Viscose Corp's. Textile Research Department at Marcus Hook, Pa. Forty delegates attended the meetings, which covered every major phase of processing rayon, both filament yarn and staple fiber, and the use of rayon in all textile fields.

Argentine Textile Imports. The United Kingdom's peacetime competitors are reappearing in the Argentine textile market, with France offering wool yarns and cloth and Italy, Belgium, and Holland offering silks and cottons. Czechoslovakia has placed small quantities of cotton cloths on the market at prices well below ceiling prices.

Government Hemp Plants For Sale. Five plants designed for the production and processing of hemp and tow for the manufacture of rope and twine have been offered for sale or lease by the War Assets Administration. Located in Indiana, Iowa, Minnesota, and Wisconsin, each of these plants contains 31,000 sq. ft. of floor space in eight one-story buildings with a 200-hp. steam engine.

AT STA's EASTERN CAROLINA DIVISION meeting at Raleigh, N. C., May 4: left to right, B. M. Bowen, of Salisbury, N. C., president of STA; V. E. McDowell, superintendent, Rosemary Mfg. Co., Roanoke Rapids, N. C.; A. R. Marley, superintendent, Erwin Cotton Mills, Durham, N. C.

Announcing...



the 3 PRODUCTIMETER 3-shift LOOM PICK COUNTER

You've been waiting for it . . . it's here . . . the Productimeter 3-shift Pick Counter, for accurately registering production of each weaver on each 8-hour shift.

It's tamper-proof and fool-proof . . . made with a shutter mechanism that positively prevents falsification or "build up." When the reading line starts at zero the figures can only be moved ahead by actual loom production.

Consider these features:

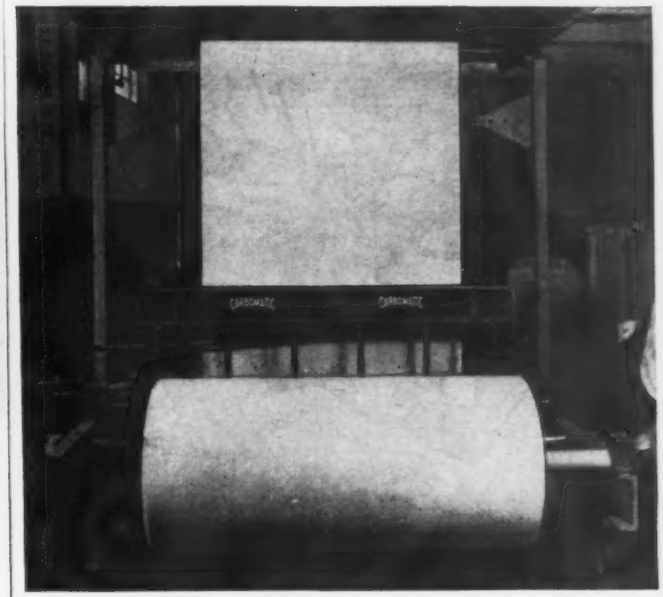
Made in 3 and 4 figures capacity
Reset or non-reset . . . for 2 and 3 shifts
Geared to register one for every 1000 picks . . . other gear ratios for every loom installation
Resettable from either side
Center drive . . . interchangeable on right or left looms
Shift knob for 4 positions including neutral
Furnished complete with mounting brackets, drive, etc.
Rustproof and dustproof
Finest construction . . . precision built for long, satisfactory performance

Plan now to install Productimeter Pick Counters on your looms . . . for exact control of production and accurate records of wage payment.

Send for complete details!

DURANT MANUFACTURING COMPANY
1931 N. Buffum Street, Milwaukee 1, Wisconsin
131 Orange Street, Providence 3, R. I.

CARBOMATIC
INFRA-RED
SINGEING UNIT



New Type Unit Hailed By Leading Textile Firms

Mr. Collins, general manager, Empire Piece Dyeing and Finishing Co. writes: ". . . we are perfectly satisfied with the results obtained since installing *Carbomatic burners on the Singer and Palmer. The singer operation has been stepped up approximately 100 percent; the palmer operation has been stepped up approximately 50 percent.* Generally, the results are very good not only from a standpoint of increased yardage but also a more thorough drying job. This equipment has been in operation now for the past several months and we are quite confident that present figures are permanent."

Carbomatic units make possible the processing of several widths of material on the same unit, with necessary controls incorporated as an integral part. Variable speed control enables singeing of lighter or heavier goods at the proper speeds.

Carbomatic singers are fully automatic, their operation is absolutely fool-proof. Flame is automatically shut off if the machine is stopped for any reason whatsoever. Any type gas or gaseous fuels may be used.

Carbomatic Engineers Design and Install gas or electric units for drying, curing, carbonizing, singeing. 65% of our orders are repeat orders. Tell us your conditions—no obligation.

Send for Bulletin TW-10

INFRA-RED DIVISION
CARBOMATIC CORPORATION
117 WEST 63rd STREET • NEW YORK 23, N. Y.

In Canada—Canadian Textile Engrg. Ltd.
980 St. Antoine Street, Montreal, P. Q.

IF IT'S INFRA-RED—BE SURE IT'S CARBOMATIC

DESIZE WITH EXSIZE

The Winning Finish!

YOU'RE BOUND to be way out in front if you finish your fabrics with EXSIZE . . . the desizer which is a concentrate of natural enzymes, with no trace of harsh alkalis, acids, or destructive chemicals.

EXSIZE works quickly, gently, gives a soft elastic feel, uniform absorbency . . . a good "hand." And what's more a few cents' worth will desize hundreds of yards of cotton or cotton-mixed goods.

Why not have our Pabst Technical Man show you the advantages of this famous desizer right in your own mill . . . or use our laboratories for your tests? We'll be delighted to send free booklet on request.

PABST BREWERIES

Copr. 1946, Pabst Brewing Company, Milwaukee, Wisconsin.

PABST SALES COMPANY
CHICAGO, ILLINOIS
Warehouses at Jersey City, and Textile Warehouse Company, Greenville, S. C.

NEWS ABOUT Suppliers

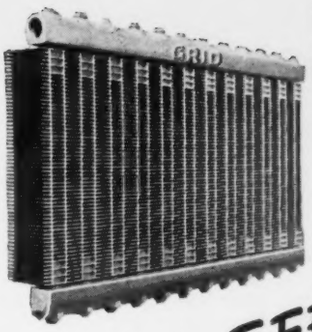
H & B American Machine Co., Pawtucket, R. I.—The majority of the common stock and a substantial block of the outstanding preferred has been sold by Miss Mabel L. Riley and the C. E. Riley Estate, of Boston, Mass., to interests headed by William A. Sipprell, Jr., who becomes chairman of the board. Mr. Sipprell is one of the chief executives of William Hunt Co. interests, which have operated in China over more than 20 years, representing more than 70 American manufacturers. Recently Mr. Sipprell has been president of the China Corp., New York and Washington, which functions among its other activities as correspondents in the United States for the William Hunt interests. With the change in ownership of H & B, other organization changes include the election of Louis C. Edgar (for the last several years general manager of the Martins Ferry Division of the Blaw-Knox Co.) as president; E. J. McVey, from his former position as vice president and sales manager, becomes executive vice president and general manager; Frederic J. DeLorme, formerly with the accounting firm of Haskins & Sells, becomes secretary and treasurer. Walter Greenwood, associated with the company for 50 years, was elected a director and assistant secretary, and Alden Ackerman was elected assistant treasurer. Melville F. Weston, of the firm of Powers & Hall, who had served as president of the company since May 31, 1945, will continue as a member of the new board of directors while acting as general counsel. Mr. Sipprell states that "the company's policy is pointed toward substantially increasing its production facilities to adequately serve domestic and foreign markets, with emphasis on increasing its service of old clients' requirements."

Proctor & Schwartz, Inc., Philadelphia, has appointed Stanley Whiteway as publicity director. He was formerly advertising manager, and has returned after three years in the Army. In his new capacity he will guide the general publicity and public relations policies, while John Reinhardt, advertising manager during Mr. Whiteway's leave of absence, will continue in that position and take charge of the trade journal and direct mail campaigns. Mr. Whiteway will also edit the company's house organ, *"P & S News."*

LOUIS P. BATSON, for many years identified with the textile industry, has resigned his position as director of sales, Southern Shuttles Division of Steel Heddle Mfg. Co., Greenville, S. C., and secured interest in the Mountain City Foundry & Machine Co., Greenville, manufacturers of patented devices for textile machinery, particularly the "Hunt Loom Spreader" and Hunt patented vertical cam-shaft vertical stand. He will become general manager of the Mountain City firm. For many years Mr. Batson represented Shambow Shuttle Co. in the South and operated their Southern plant. In 1929, he organized Southern Shuttles, Inc., which later was merged with the Steel Heddle Mfg. Co., of Philadelphia. He has developed and patented many improvements that are now in use.

U S Bobbin & Shuttle Co., Lawrence, Mass., has elected William J. McGeough, of Providence, R. I., to the office of executive vice president. The company had Lowell Textile Institute's 1946 graduating class as guests at its plant on May 21. Professors Brown, Hoellrich, and Rosatto accompanied the group.

Job J. Mills, textile engineer and consultant, has withdrawn from the John A. McPherson Co., Greenville, S. C., to devote his entire time to his own engineering practice. Mr. Mills specializes on modernization planning, manufacturing problems, and proc-

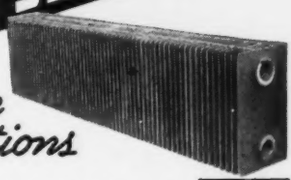


HERE'S A SOLUTION TO CLOTH DRYING PROBLEMS

INEXPENSIVE BUT EFFICIENT!

GRID BLAST SECTIONS!

One Piece Heating Sections



HIGH TEST CAST IRON HEATING SECTIONS

INVESTIGATE GRID Blast Sections (coils) as a solution to your cloth drying problems. They're efficient but inexpensive and being made of high test cast iron, withstand steam pressures up to 250 lbs., without maintenance expense. The one piece construction heating sections (patented) have no tortuous air passages, and being compact they occupy minimum space. They have no soldered, brazed, welded or expanded connections to become loose. And, being made of one type metal, no electrolysis can develop to cause corrosion.

Also, for fog removal use the reliable GRID Unit Heater. Complete details upon request. Write for booklet "Corrosion in Unit Heaters".

D. J. MURRAY MANUFACTURING CO. WAUSAU WISCONSIN

TIME-TESTED TIPS FOR MILL MAINTENANCE MEN

Easy Way to Clean Kettles Size Boxes & Storage Vats

Next time you've got the job of removing tallow, glycerine, wheat-starch deposits from size boxes, kettles and storage vats, do it safely, swiftly with Oakite Composition No. 22.

Try this time-saving technique: First, make up a recommended solution of Oakite Composition No. 22 in mixing kettle. Allow solution to soak in kettle with paddles turning slowly. Then pump to storage vat and size boxes. After required soaking period, pressure rinse. You will find that the effective detergent action of Oakite Composition No. 22 quickly, thoroughly removes troublesome deposits . . . leaving equipment in excellent condition for efficient operation.

Your letterhead request brings you FREE informative literature! In-mill demonstrations arranged at your request. No obligation, of course.

OAKITE PRODUCTS, INC., 42 Thames St., NEW YORK 6, N. Y.

Technical Service Representatives Conveniently Located in All Principal Cities of the United States and Canada

OAKITE *Specialized* CLEANING

MATERIALS · METHODS · SERVICE · FOR EVERY CLEANING REQUIREMENT

KILLS PLANT MAINTENANCE ENEMIES

Damp-Tex super-enamel can be applied to surfaces despite moisture, heat, fumes and many other extreme conditons. Its water-proof film retards deterioration, increases efficiency, turns depressing, dingy interiors into gleaming, porcelain-smooth beauty. Resistant to fungus, 2% caustic solution, steam and lactic acid. One coat covers. Comes in white and colors. Used in over 4000 plants. Write for our trial offer.

Proved Fungus Resistant by FUNGUS TEST

Proved Lactic Acid Resistant by ACID TEST

DAMP-TEX FOR WET OR DRY SURFACES

STEELCOTE MFG. CO. • ST. LOUIS, MO.

Canadian Manufacturer—Standard Paint & Varnish Co., Windsor, Canada

Reminder

Stainless steel equipment for more profitable textile dyeing

STAINLESS STEEL DYEBOXES — Fully enclosed and open types. Round corners facilitate cleaning.

STAINLESS STEEL TANKS — Tanks for every application built to any required size and shape. Welded round corner construction.

STAINLESS STEEL UTENSILS — Pails, beakers, ladles and other utensils standard or fabricated to your specifications.

STAINLESS STEEL DRY CANS — Cylinders fabricated to your specifications or mounted on heads furnished by you.

STAINLESS STEEL FABRICATION — Completely equipped plant, specialists in fabricating Stainless Steel textile equipment. Experienced engineering staff. We work from your specifications or our own.

Send for folder "3 for 5"—showing Blickman Stainless Steel Dyeing Equipment.

S. BLICKMAN, INC

406 GREGORY AVENUE, WEEHAWKEN, N. J.

Manufacturers of stainless steel textile equipment, dye boxes, linings, cylinders, dry cans, hoods and tanks.

essing of synthetic and blended fibers. His headquarters is 37 Cammer Ave., Greenville, S. C.

United States Rubber Co., New York, has appointed Harry E. Cooper as manager of its Lastex yarn and rubber thread division, succeeding Harlow W. Waite, who is retiring after 42 years with the company. Mr. Cooper was a superintendent of the company's plant in Providence, R. I., with supervision over the production of rubber thread, Lastex yarn, Laton yarn, Lyntron cut thread and other products. Percy Adamson will continue as selling agent of Lastex and Laton yarns produced by the division.

Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J., has appointed Dr. Dale R. Eberhart as research fellow. He has been with Calco since 1935. Calco has also appointed Dr. Robert P. Parker, as assistant to the research director. He has been with the company since 1933. For the last two years, he has been an assistant director of the organic section of the research department.

Commonwealth Color & Chemical Co., Brooklyn, N. Y., has engaged Keith A. Bragg as a Southern representative with headquarters in Charlotte, N. C. Mr. Bragg has been associated with the dyeing and finishing business.

Permutit Co., New York, has appointed H. L. Beohner and A. D. Way as technical manager and chief mechanical engineer respectively.

W. P. Bolen Co., Charlotte, N. C., is now producing and selling chemical specialties to the textile industry. These include detergents, wetting agents, dispersing agents, and strippers for cotton, wool, viscose, and acetate rayons. Paul Bolen is head of the company.

Stein, Hall & Co., Inc., New York, has promoted two salesmen, E. M. Clevan and D. H. Lipman, to be assistant managers of its New York branch. C. J. Dunachie is manager of the branch.

Celanese Corp. of America, New York, will build an addition to its plastics plant at Belvidere, N. J. Both cellulose acetate and cellulose proprionate molding material will be made in the new unit. Production at one of the present buildings at the Belvidere plant should begin in November but full scale operations will not be reached until mid-1947.

Hungerford & Terry, Inc., Clayton, N. J., have appointed the Gulf Engineering Co., New Orleans, La., to handle their line of water-treating equipment. Ralph M. Westcott Co., Los Angeles, Calif., has been named sales representative in Southern California.

E. I. du Pont de Nemours & Co., Wilmington, Del., has named Dr. Crawford H. Greenewalt to succeed Jasper E. Crane, who resigned as a vice president and member of the executive committee effective May 31. Dr. Greenewalt is assistant general manager of the company's Pigments Department. James B. Eliason has retired as a vice president and treasurer, and Walter J. Beadle, first assistant treasurer, has been named his successor. Hood Worthington, for the last

HERBERT T. FLORENCE (left) has been elected president and general manager of The Cleveland Crane & Engineering Co., Wickliffe, Ohio. He has been general manager of the company since 1938 and vice president since 1941. A. C. GARNETT (right), formerly secretary and treasurer, was named vice president and treasurer. W. G. Wehr was made secretary, and W. D. Vanderbilt, assistant secretary.

Style 20

LANE

The IDEAL BASKET for

LOOPERS

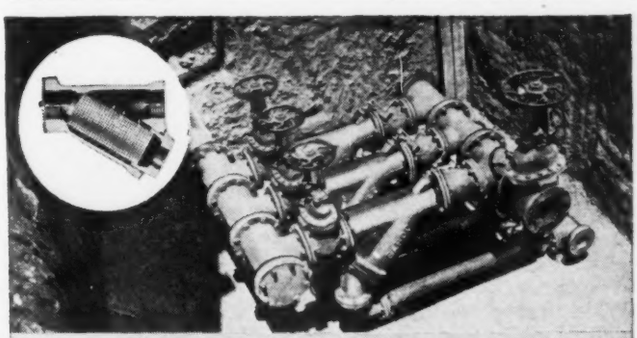
SEAMERS

RIBBERS

GENERAL

W. T. **LANE** & BROS., Inc.

Manufacturers : POUGHKEEPSIE, N. Y.



SARCO STRAINERS

PROTECT { EQUIPMENT, PROCESSES AND PRODUCTS

Sarco Strainers are effective and inexpensive insurance against costly shut-downs and heavy repair bills caused by dirt or scale in pipe lines. Keep a supply on hand and slip them in whenever changes are made. The cost is negligible.

Sarco strainers are used to strain such products as syrup, varnish, orange juice, fuel and lubricating oils in the process of manufacture. Chemical and steel industries using large quantities of river water employ strainers on pipe lines up to 8 inches.

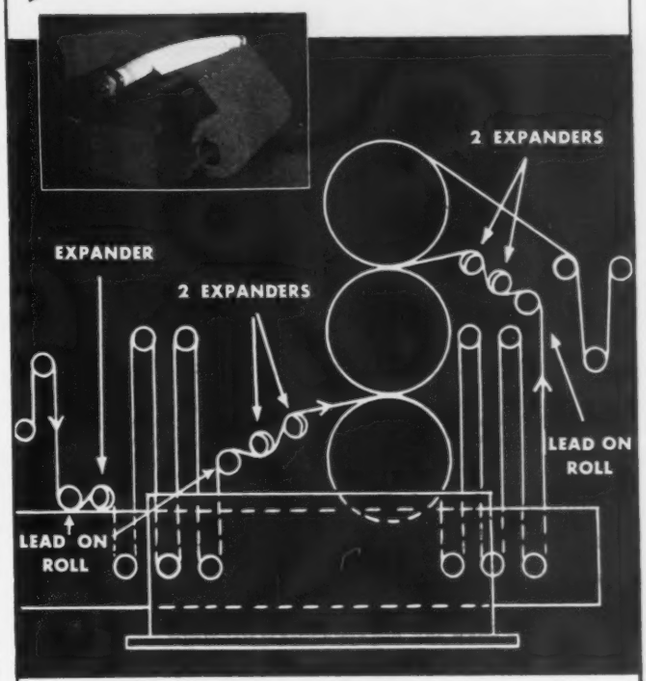
Standard Sarco strainers are made in four types, ¼" to 8" for pressures up to 900 pounds. Scraper strainers, hand or motor operated, ¾" to 8" and 200 pounds. Ask for Bulletin No. 1200.

200

SARCO SAVES STEAM

SARCO COMPANY, INC.
475 Fifth Avenue, New York 17, N. Y.
SARCO CANADA, LTD., 85 Richmond St. W., TORONTO 1, ONT.

Mount Hope Free-Wheeling EXPANDER



A TYPICAL APPLICATION

The diagram herewith shows how the Mount Hope Free-Wheeling Expander is being used on a caustic padder, immediately before it enters the first and second nips. Two Expander Rolls are used in each case to obtain good stretch and to eliminate wrinkles on both sides of the fabric. The advantages of this device are as follows:—

The Neoprene covered and ball bearing mounted expanders are so free turning that even the slippery caustic-saturated cloth turns them easily without slipping.

This freedom from slipping increases the life of the Neoprene sleeves and the width of the cloth.

Expanders can be set at any desired angle to cloth.

Ball bearings, grease packed, are securely mounted in steel spools to outlast many Neoprene sleeves and so designed that they cannot stick nor turn on the axle and cut it.

The Mount Hope Free-Wheeling Expander is suitable for use with all types of fabrics, from rayon marquisettes to cotton or rayon tire cord.

Bulletin on request

MOUNT HOPE MACHINERY COMPANY

42 Adams St., Taunton, Mass.

REPRESENTATIVES: — John H. Andersen, Inc., 138 Grand St., Paterson N. J.; Ingalls Engineering Co., 1214 Union Trust Bldg., Providence 3, R. I.; Slaughter Machinery Co., Charlotte 1, N. C.; W. J. Westaway Co., Ltd., Hamilton and Montreal 3, Canada

Might be better to Clean by Hand

Rigged with ParksTurbo Traveling Cleaners, frames are blown off every three or four minutes.

Lint and fly do not get a chance to be spun into the yarn. They are shooed away.

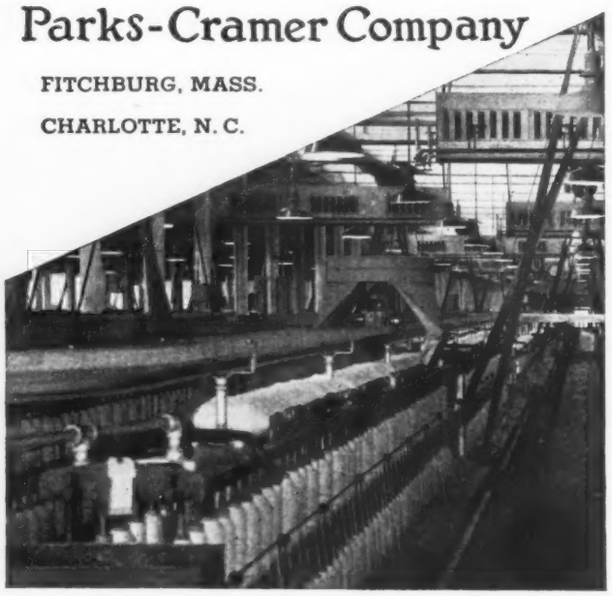
Hand cleaning, done as often or as regularly, might be better. But what spinner would want to fan a frame (not to mention five or six) fifteen or twenty times an hour? Or who would want her to?

ParksTurbo Traveling Cleaners take the drudgery out of spinners' work—and earn their keep besides.

Parks-Cramer Company

FITCHBURG, MASS.

CHARLOTTE, N. C.



three years at the Hanford Engineer Works, which Du Pont operates for the government, has been appointed assistant director of the recently organized engineering research section, Rayon Technical Division. He contributed importantly to the development of the original processing equipment for nylon. He became a supervisor in the nylon research section shortly after his transfer to the Rayon Technical Division in 1938.

Link-Belt Co., Chicago, has again obtained the services of George P. Torrence. Mr. Torrence will rejoin the Link-Belt organization on July 1, 1946 as executive vice president, and will become president of Link Belt Co., Nov. 1, 1946, at which time William C. Carter retires as president, in accordance with the company's retirement plan. Mr. Torrence was with Link-Belt from 1911 to 1936, when he resigned as president. He has been in Cleveland since 1936 as vice president and general manager of the Rayon Machinery Corp., a subsidiary of Industrial Rayon Corp., and as president of the Cleveland Pneumatic Tool Co.

Fairbanks, Morse & Co., Chicago, has elected L. W. Stolte as secretary of the company to replace Fred C. Dierks, who recently retired after service of 45 years.

Hercules Powder Co., Wilmington, Del., has appointed Walter E. Gloor, plastics supervisor at the Parlin, N. J., plant, to head a new products development section of the company's Cellulose Products Department in Wilmington, Del. Courtland K. White, formerly in charge of chlorinated rubber production at the Parlin plant, will become plastics supervisor there.

Dow Chemical Co., Midland, Mich., has consolidated its magnesium operations under a separate executive board and a general manager, and resumed magnesium production at the company's sea water plant at Freeport, Texas. The company's magnesium sales, fabrication, and technical divisions are together under the general managership of Dr. J. D. Hanawalt, former director of metallurgical research.

Pittsburgh Plate Glass Co., Pittsburgh, Pa., has appointed Robert Wardrop as assistant manager of glass advertising and production. He recently completed his terminal leave as a lieutenant colonel after four years service with the Army. Clarence E. Ralston has retired as safety director after association with the glass company's safety department for more than 23 years.

Monsanto Chemical Co., St. Louis, Mo., has appointed Edwin L. Hobson to the sales staff of its Plastics Division, effective June 1. From 1937 to 1941, he was a sales engineer for the Bakelite Corp.

S. C. Johnson & Son, Inc., Racine, Wis., have appointed John H. Hurley, former product finishes sales manager, to be manager of the export department.

Far East Service, Inc., New York, has been formed by Kay K. Nishimura, with offices at 531 West 124th St., to specialize in Japanese publishing and advertising for both the domestic field, Hawaii, and Japan; also classes in Japanese language studies for tradesmen, businessmen, buyers, and others. Mr. Nishimura was formerly Japanese and Far East language editor for the United States Department of State.

Aluminum Co. of America held an exhibit at the Biltmore Hotel, New York, on May 9, and showed its new educational film, "Dateline Tomorrow." New chromium-plated aluminum printing rollers were exhibited.

Vit Films (Visual Industrial Training) has been established with offices at 60 E. 42nd St., New York 17, N. Y. This organization is specializing in production of training sound slides and motion pictures for the textile industry. Vit Films has commissioned Werner Textile Consultants Inc., New York, to be their technical advisers in the production of a series of sound slides the first of which deals with raw material waste and its prevention in textile mills.

New Departure Division of General Motors Corp., Bristol, Conn., has named Alwin A. Gloetzner to head the new Southeastern territory. He has been in charge of New Departure's Washington office. His headquarters for the added functions will continue to be 1154 National Press Building, from which point he and his staff will represent New Departure in the District of Columbia, Southern and Western Maryland, Virginia, Eastern Tennessee, North and South Carolina, Alabama, Georgia, and Florida.

Pittsburgh-Corning Corp., Pittsburgh, Pa., plans to build two plants at Sedalia, Mo. for the production of glass block and Foamglas, a cellular glass insulat-

JONES TACHOMETERS

CHECK PERFORMANCE EFFICIENCY OF YOUR OPERATING EQUIPMENT

Many factors can affect your production efficiency. If belts are slipping you lose production. If motors are not running up to speed, there is a power loss, with a resultant drop in production. And whenever there is a failure to make a change of gear, or a wrong gear is put on a machine, then production is affected. With JONES Portable or Fixed TACHOMETERS applied to your textile machinery, you can accurately control production time as well as the entire production line capacity by checking RPM of motors, rollers, shafts, etc. JONES TACHOMETERS measure speeds either in RPM, feet or yards per minute, total output, or any desired indication. Know your machine speeds and you increase output, reduce spoilage to a minimum, forestall serious machine breakdown, increase plant operating efficiency, and lower operating costs.

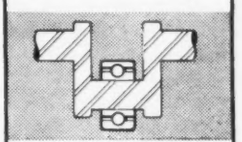
Type B
JONES TACHOMETER

Write for New Bulletin

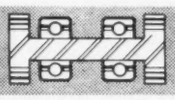
JONES MOTROLA CORP.

437 FAIRFIELD AVENUE STAMFORD, CONN.

"IMPOSSIBLE" APPLICATIONS OF SPLIT BALLBEARINGS

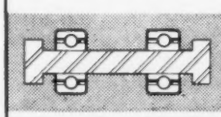


INTERMEDIATE CRANKSHAFT BEARINGS AND CONNECTING RODS



TRANSMISSION SHAFTS, GEAR CLUSTERS (INTEGRAL CONSTRUCTION)

SHAFTS, FINISH-TURNED ONLY AT BEARING LOCATIONS



SHAFTS WITH SOLID FLANGED END CONSTRUCTION.

The "IMPOSSIBLE" made PRACTICABLE by the SPLIT BALL BEARING

Anti-friction bearing installations would be impossible in the applications depicted at the left were it not for the Split Ballbearing. Using these bearings as intermediate crankshaft bearings, in transmissions, accessory drives and gear clusters (integral construction) permit the use of anti-friction bearings thruout in such installations.

Split Ballbearings are made to the highest precision standards, are efficient in operation and give long satisfactory service.

SEND FOR CATALOG TW-6-46

·DIVISIBLE RACE BEARINGS·

SPLIT BALLBEARING CORPORATION

LEBANON, NEW HAMPSHIRE, U. S. A.

IT'S NO SECRET

that in the Southeast there are excellent opportunities for manufacturing and distributing enterprises of almost every kind. The records of companies already located here give ample evidence of that.

But, finding the right location for a specific operation calls for an intimate knowledge of the factors which will make for the success of the enterprise. Your search for the most satisfactory location can be a time and money consuming process.

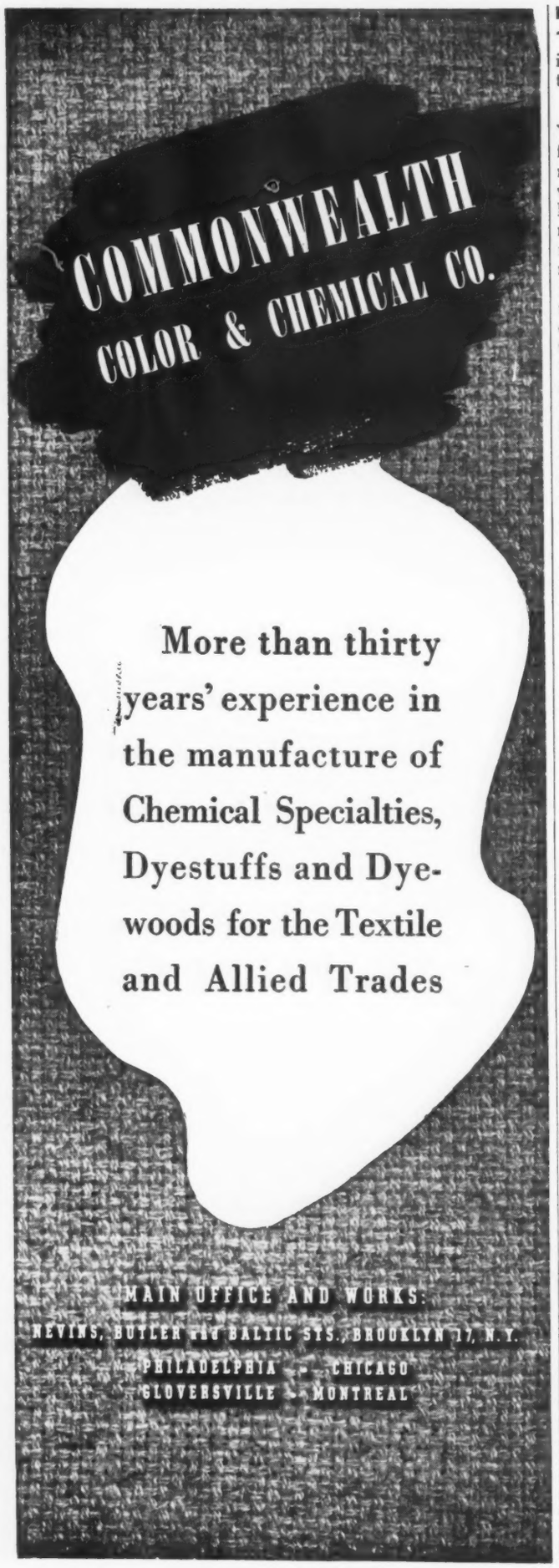
It need not be, however. Our staff of trained specialists, equipped with knowledge gained through years of experience in helping management to locate plants where they will enjoy the greatest advantages, is ready to assist you. Detailed, up-to-the minute information on sites recommended by us will be furnished you promptly.

Remember, too, that our services are rendered without obligation on your part and all negotiations are held in strict confidence. Simply address:

Dallas T. Daily
General Industrial Agent
Seaboard Air Line Railway
Norfolk 10, Va.

SEABOARD
AIR LINE RAILWAY

THROUGH THE HEART OF THE SOUTH


COMMONWEALTH
COLOR & CHEMICAL CO.
More than thirty years' experience in the manufacture of Chemical Specialties, Dyestuffs and Dyewoods for the Textile and Allied Trades
MAIN OFFICE AND WORKS:
NEVINS, BUTLER AND BALTIC STS., BROOKLYN 17, N.Y.
PHILADELPHIA - CHICAGO
GLOVERSVILLE - MONTREAL

ing material. Estimated cost of the program is $2,000,000.

Liquid Conditioning Co., New York, has been formed by three former executives of the Permutit. Co.: S. B. Applebaum, vice president and director; H. L. Tigar, vice president and director; and Norman E. Brice, mechanical engineer, all of whom resigned on Apr. 15, after about 30 years of association with Permutit. Their new company will carry on a general business in the field of water conditioning for industrial, municipal, railroad, and household use. Also, they will provide equipment and materials for conditioning other liquids, such as syrups, chemical liquids, etc. Present offices are at 423 West 126th St., New York. Plant will be constructed at Linden, N. J.

Colorado Fuel & Iron Corp., New York, N. Y., has appointed Jerry Sabin, formerly advertising manger of the Colorado Division, to be director of advertising for all divisions and subsidiaries. He was first employed by CF&I in June, 1926, as sales promotion worker in the field division. He will continue to maintain headquarters in Denver. Matthew R. Rosse has been appointed as export manager for all divisions and subsidiaries.

Consolidated Products Co., Inc., New York, N. Y., has bought the Thermoid Rubber Plant, South Clarence St., Los Angeles, Calif., from Thermoid of California, Inc. This is the former Grizzly Mfg. Co., which, under Thermoid ownership, has been producing rubber belting, brake linings, hose, and molded products. If negotiations to reopen the plant under new ownership fail, the machinery will be liquidated and distributed to other rubber plants.

International Nickel Co., New York, has added R. M. Wilson, Jr., to the technical service section of its Development and Research Division as a welding engineer. He was formerly welding engineer at the Bloomfield, N. J., works of General Electric Co.

Genn & Logan have been formed at 3959 N. Lincoln Ave., Chicago, Ill., to represent The C. M. Kemp Mfg. Co., of Baltimore, Md., manufacturers of industrial equipment for process heating, industrial combustion, atmosphere generation, etc. The principals of the new firm, Earl Genn and Frederick D. Logan, were formerly vice president and chief engineer, respectively, of Gas Appliance Service, Inc., Chicago.

H. K. Porter Co., Inc., and subsidiaries, Pittsburgh, Pa., have opened a new district office in the Paul Brown Building, St. Louis, Mo.

American Mineral Spirits Co., Columbus, Ohio, has reemployed Karl F. Giloth in the sales department. He has returned to the company after two years of duty with the Navy. He will cover Ohio, Indiana, Michigan, Kentucky, West Virginia, and Western Pennsylvania.

Plastics Guild Corp., Paterson, N. J., has entered the transparent film printing and processing business. The plant at 85 Fifth Ave. coats, laminates, embosses, and polishes plastics, films, pliofilms, cellophane, acetate, and synthetics. Oliver Oakley Brant is president.

Air Devices, Inc., New York, as part of a postwar expansion program, has appointed R. W. Christie to the newly-created post of research engineer. He was previously associated with U. S. Testing Co. J. Keselis has been made production manager, and T. A. Hughes, manager of sales promotion.

Bendix Aviation Corp., Detroit, Mich., has appointed Malcolm P. Ferguson, of South Bend, Ind., as president to succeed Ernest R. Breech, who has resigned to become executive vice president and a director of the Ford Motor Co.

Freedom-Valvoline Oil Co., Freedom, Pa. and Cincinnati, Ohio, is the merger of Freedom Oil Co., Galena Oil Corp., and Valvoline Oil Co. William G. Bechman is chairman of the board and Gus P. Doll is vice chairman and executive president. Earle M. Craig is president.

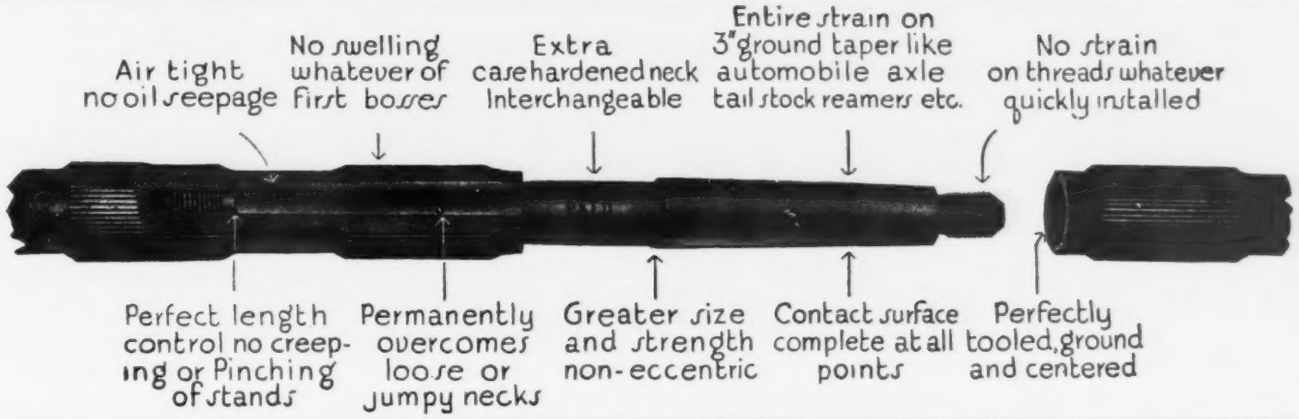
Norma-Hoffmann Bearings Corp., Stamford, Conn., reports that Lucius I. Wightman has retired after more than 34 years of continuous association with the firm as its advertising agent. Sutherland-Abbott of Boston has been designated as advertising agency for the firm. Mr. Wightman has been retained by Norma-Hoffmann in a consulting capacity.

The B. F. Goodrich Co., Akron, Ohio, has named Dr. E. T. Lessig as manager of textile control in its Tire division. He joined the company in 1931, and has spent much of his time on textile research.

SPECIAL ANNOUNCEMENT

All makes and kinds of new fluted steel rolls furnished in large or small quantities, equipped with:

GUILLET'S INTERCHANGEABLE TAPER FITTING CASE HARDENED ROLLER NECKS, AS GRAPHICALLY ILLUSTRATED BELOW:


Air tight no oil seepage
No swelling whatever of first bosses
Extra case hardened neck Interchangeable
Entire strain on 3" ground taper like automobile axle tail stock reamers etc.
No strain on threads whatever quickly installed
Perfect length control no creeping or Pinching of stands
Permanently overcomes loose or jumpy necks
Greater size and strength non-eccentric
Contact surface complete at all points
Perfectly tooled, ground and centered

Prices most reasonable with fair allowance for your old rolls.
Chromium plated flutes or plain with proper spacing, pitch and number of flutes.
We guarantee this new product and respectfully solicit a trial order at least.
Estimates gladly furnished.

DIXIE SPINDLE AND FLYER CO., INC., CHARLOTTE, N. C.

1906 N. Brevard Street — ALBERT M. GUILLET, President — Telephone 3-1377

WE'VE LEARNED A LOT IN OUR 50 YEARS

50 years of specialized experience in producing tanks and tubs for the textile industry *has taught us some things that will be valuable to you!*

Let us tell you about our complete Caldwell service, which includes Stainless Steel-lined tanks and tubs—round, rectangular and special shapes.

Catalog on request.

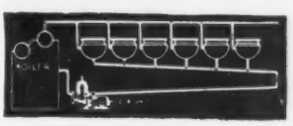
W. E. CALDWELL CO.
INCORPORATED
2060 Brook St. — Louisville, Ky.

Caldwell TANKS AND TOWERS

GEARS TO ORDER

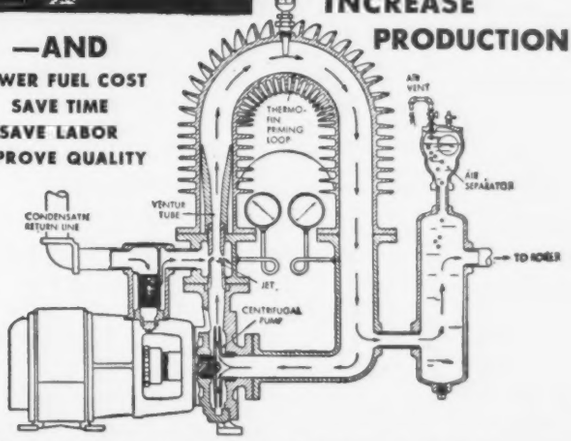
Spiral and helical gears; special couplings, bushings and collars; pins, pulleys and rollers. Made to your specifications—*promptly.*

KELLEY GEAR & TOOL CO.
Bristol, Tennessee



THIS SIMPLE PUMP WILL INCREASE PRODUCTION

—AND
LOWER FUEL COST
SAVE TIME
SAVE LABOR
IMPROVE QUALITY



This cut shows a cross-section of the heart of the C-B System of High Pressure Condensate Return—The Jet Loop Pump—actually two pumps in one—a centrifugal pump which energizes an eductor which in turn pumps the condensate from drainage return lines directly into the boiler against boiler pressure in a closed circuit. It completely eliminates entrained air from the circuit before discharging to boiler. Savings reported by users are almost unbelievable. Write for Publication 3250.

COCHRANE CORP., 3116 N. 17th St., PHILA. 32, PA.

COCHRANE C-B SYSTEM

CONDENSATE RETURNED TO BOILERS AT HIGH PRESSURE AND HIGH TEMPERATURE

Whitman

One of

America's Biggest Names

In Textiles

Wherever textiles are bought in volume, the name WHITMAN is well known. Known for long experience . . . for modern ideas . . . for keen styling . . . for sound merchandising methods.

Mills represented by the WHITMAN Company enjoy:

- Association with some of the best mill names in the industry.
- The services of a young, yet experienced sales force well established in the most desirable markets.
- Cooperation on merchandise planning, styling, distribution and, when desired, on problems of taxation and general management.

Inquiries are invited from non-conflicting accounts.

ARLINGTON MILLS
Lawrence, Mass.

MONOMAC SPINNING CO.
Lawrence, Mass.

NONQUITT MILLS
New Bedford, Mass.

NASHAWENA MILLS
New Bedford, Mass.

WILLIAM Whitman COMPANY, INC.

General Offices: 261 Fifth Avenue, New York 16, N. Y.

Cotton and Rayon Fabrics Division: 40 Worth Street, New York 13, N. Y.

BOSTON 78 Chauncy Street | CHARLOTTE Commercial Bank Building | PHILADELPHIA 1600 Arch Street | LOS ANGELES 820 South Spring Street

NEWS ABOUT Mills

Cotton Mill News

Bath Mills, Bath, S. C., have a weave shed under construction to provide an additional 50,000 sq. ft. of floor space. Upon completion, looms from Langley Mills will be moved in.

Berkshire Fine Spinning Associates, Providence, R. I., have awarded contract to Carey Construction Co., Fall River, Mass., for repairs and alterations to a mill building at Albion, R. I.

Bibb Mfg. Co., Macon, Ga., will increase capital stock by $5,000,000. The new stock would be retained in the treasury to be disposed of by the directors for the purpose of acquiring other properties.

Boston Woven Hose & Rubber Co., Cambridge, Mass., is accepting bids from an invited list of contractors for a concrete building, 45x325 ft., to be erected on Portland St. from plans by Charles T. Main, Cambridge.

Bridgeport Fabrics, Inc., Bridgeport, Conn., has preliminary plans for the construction of a two-story addition to plant No. 2.

Bridgeton Yarn Co., Inc., Burrillville, R. I., was recently organized and plans to begin operation of a cotton mill soon. Bancroft Littlefield, Providence attorney, is representative.

China Grove Cotton Mills Co., China Grove, N. C., has begun construction of the new No. 3 plant which will add 15,000 spindles to the company's yarn production facilities.

Claremont, S. C.—M. S. Kistler and Herman Carpenter have opened a plant in temporary quarters and are making upholstery. The plant will later be moved into a 50 x 130 ft. building which is now under construction.

Comisiones e Inversiones, Hermosillo, Sonora, will have Mexico's largest cotton mill ready for operation late in June to manufacture denims, towels, and sheets. Already installed are 32 cards, 22 spinning frames, and 200 looms, all of which came from the United States. Jesus Rivero Quijano heads the company.

Crown Mfg. Co., South Attleboro, Mass., has installed three high-speed warpers and a high-speed slasher, with another of the latter coming. The company has also added 100 used looms and will install another 100 in about a month. The firm is now producing spun rayon and blends in addition to its normal output of cotton goods.

Erwin Cotton Mills, Erwin, N. C., has awarded general contract to William Muirhead Construction Co., Inc., Durham, N. C., for a new boiler house. J. E. Sirrine & Co., Greenville, S. C., are consulting engineers.

Esmond-Virginia, Inc., Waynesboro, Va., has broken ground for a 50 x 156 ft., two-story addition to house additional machinery.

Fairhope Fabrics, Inc., Fall River, Mass., have purchased a 23,000 sq. ft., two-story building to expand manufacturing facilities and plan a one-story extension to provide an additional 5,000 sq. ft.

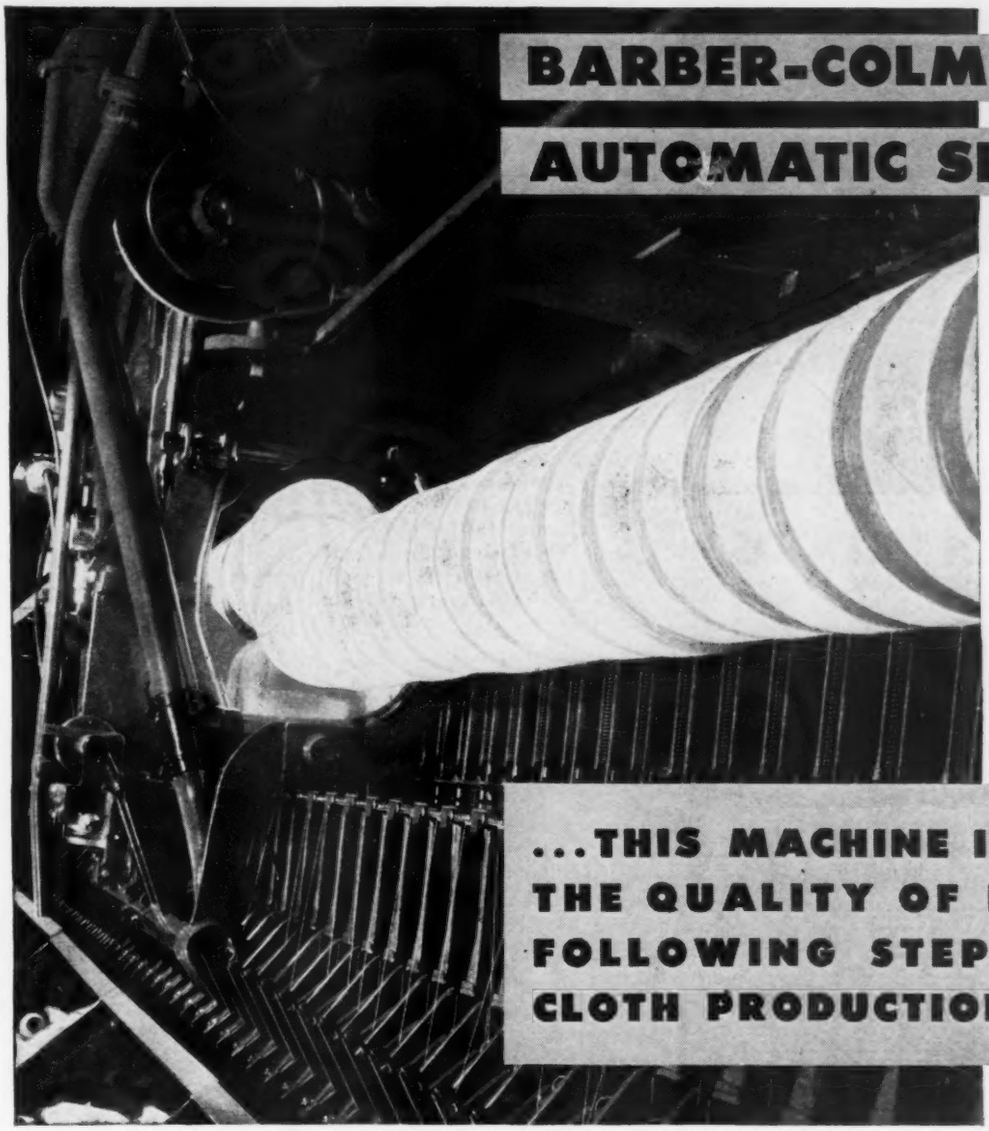
International Looms, Elizabeth, N. J., will open a plant in Clinton, S. C., in a building which has been leased. The company weaves upholstery fabrics, draperies, and dress materials.

Lane Cotton Mills Co., New Orleans, La., has passed into the control of the same interests which operate Pomona Mfg. Co., Greensboro, N. C., Hyde Park Mills, Covington, Tenn., and other mills. New owners plan to expand the property.

Lincoln Warping Co., Pawtucket, R. I., has been formed by Henry J. Leduc and Gaston Moreau, both formerly with Rhode Island Fabrics, Pawtucket. The owners have acquired floor space and do commission warping and slashing of cotton, rayon, and blends.

Manila, P. I.—The Philippines' only cotton-textile mill is seeking 30,000 new spindles and 700 automatic looms in the U. S.

Marshall Field & Co., Chicago, Ill., have projects under way involving a $1,000,000 machinery modernization in the company's various mills. The



BARBER-COLMAN AUTOMATIC SPOOLER

...THIS MACHINE IMPROVES THE QUALITY OF EVERY FOLLOWING STEP IN CLOTH PRODUCTION

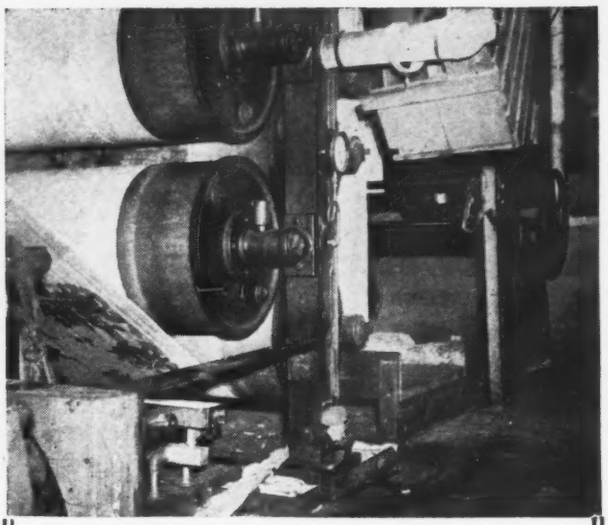
WHERE Barber-Colman Automatic Spoolers are in use, a better package is delivered to the warper, a better beam to the slashers, better loom beams to the weave shed, and better cloth to the finishers. The quality, accuracy, durability, and uniform production of Barber-Colman Automatic Spoolers are the basis for these valuable improvements: less warper stops, more uniform slashing, fewer loom stops, and less seconds. Any experienced mill man will appreciate machinery which not only increases production and lowers costs, but also gives him very little trouble, requires few repairs and very few service calls, and delivers a uniform package steadily with a minimum of down time. Any mill man can start toward achieving these beneficial results by investigating the possibility of installing Barber-Colman Automatic Spoolers and Super-Speed Warpers in his mill. *Ask your Barber-Colman Representative for data.*

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND



DRYING PRINT GOODS
WITH
RED-RAY RADIANT HEAT BURNERS

Faster Drying — Better Drying

WRITE FOR BULLETINS

RED-RAY MANUFACTURING CO., INC.
455 West 45th Street New York, N. Y.

For Maintained Shrinkage—
Perfect Finish—Long Life

HUYCK
Sanforizer Blankets

HUYCK SANFORIZER and Palmer Blankets are daily meeting the most exacting requirements of finishers throughout the industry. From the lightest and finest fabric to the coarsest denim, there is a special Huyck blanket to meet your specific needs.

Huyck Sanforizer blankets retain high shrinkage and finish properties to the last.

PALMER BLANKETS—also available for your special requirements.

Write for information or see our representative

F. C. HUYCK & SONS
KENWOOD MILLS
Albany, New York

program is expected to be completed this year.

Martinsville Cotton Mill Co., Martinsville, Va., reported some time ago as having changed ownership, was bought by McMahon & Cremins, Inc., New York, for about $374,000.

National Automotive Fibers, Inc., Detroit, Mich., plans a 300 x 600 ft., one-story branch mill, reported to cost over $450,000, with equipment. Giffels & Ballet, Inc., Detroit, are architects and engineers.

New Delhi, India—Proposals for the expansion of India's cotton-textile industry, calling for the immediate addition of approximately 2,750,000 spindles, are contained in a report just issued by the Post-War Planning Committee.

Pacific Mills, Boston, Mass., are planning a $4,870,000 expansion program for the Lyman division, Spartanburg, S. C., the Columbia division, Columbia, S. C., and the recently acquired Rhodhiss Cotton Mills, Rhodhiss, N. C. New buildings, machinery, and materials are included in the plan. The company has purchased the National Munitions Corp.'s plant in Carrboro, N. C. This property adjoins Carrboro Woolen Mills, which was opened by Pacific Mills a year ago. Pacific has transferred its product research laboratories from East Newark, N. J., where they were temporarily located during the war, to Lyman, S. C.

Peerless Spinning Corp., Lowell, N. C., has contracted to sell its entire plant to Bernard Weil, New York, for about $600,000.

Powdrell & Alexander Co., Inc., Danielson, Conn., has taken over a large amount of floor space in the plant of Hodges Carpet Co., Indian Orchard, Mass., on a five-year lease.

Shanghai, China—A 10,000-spindle cotton mill called Hoong Foong has been established by the Yung brothers, members of an influential Chinese cotton family. Yung Hoong-Yuan is general manager. Additional machinery is expected to arrive shortly from England, and the increase will bring the spindle total up to 30,000.

J. P. Stevens & Co., New York, N. Y., is reported to be sponsoring a $50,000,000 merger involving that company and a number of southern mills, including Piedmont Mfg. Co., Piedmont, S. C., Republic Cotton Mills, Great Falls, S. C., Wallace Mfg. Co., Jonesville, S. C., Victor-Monaghan Co., Greenville, S. C., Aragon Baldwin Mills, Whitmire, S. C., Dunean Mills, Greenville, S. C., Slater Mfg. Co., Slater, S. C., and Cleveland Cloth Mills, Shelby, S. C.

Textile Industries Ltd., recently took over the plant and business of the former Zephyr Looms & Textiles, Ltd., Guelph, Ont. Additional looms have been purchased. It is planned eventually to double present capacity.

Trion Co., Trion, Ga., and **Ware Shoals Mfg. Co.,** Ware Shoals, S. C., will, according to reports, be consolidated with Riegel Textile Corp., New York, N. Y., if a recommendation of their boards of directors is approved by the stockholders.

Turner Bros. Mill, Lincolnton, N. C., is producing broadcloths. The initial machinery installation includes 30 looms. The plant was established by G. L. Turner and W. T. Turner.

Utica & Mohawk Mills, Seneca, S. C., has begun work on a building for the addition of 35,000 spindles to bring the plant's spindle capacity to 75,000. Contract has been awarded to Daniel Construction Co., Greenville, S. C. This is part of a $1,500,000 expansion program.

Utica & Mohawk Mills, Inc., Utica, N. Y., and **Wamsutta Mills,** New Bedford, Mass., have negotiations under way which may result in a recommendation for merger of the two companies.

Virginia Mills, Inc., Swepsonville, N. C., has let general contract for a one-story addition to R. F. Mitchell, Jr., Burlington, N. C. Cost, with equipment, reported about $50,000.

Wabasso Cotton Co., Ltd., Three Rivers, Que., has completed plans for a new plant on a 30-acre site east of Grand Mere, Que.

Warren Combed Yarn Corp. has sold its Stanley, N. C., mill to M. H. Rhyne and associates of McAdenville, N. C., for approximately $100,000. This mill is the former Alba Mill and will henceforth be known as Rhyne Mfg. Co.

Wool Mill News

Anglo Fabrics Co., Webster, Mass., has awarded contract to J. W. Bishop Co., Worcester,

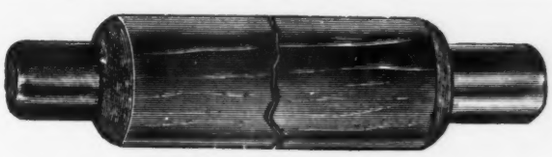
Flattering Reflection of Beauty

DuraBeau-finished hose multiplies the admiring glances sent leg-ward . . . increases sales from pleased customers. Women are flattered by the sheer appearance and dull finish . . . their shopping sense is stimulated too, by the longer wear, spot- and water-repellency, and snag-resisting qualities imparted by DuraBeau. A moment of reflection brings them to the decision to "get more of that wonderful hosiery . . . more often."

DuraBeau
Reg. U. S. A. and Canada

Scholler Bros., Inc.

Mfrs. of Textile Soaps, Softeners, Oils, Finishes • Collins & Westmoreland Sts., Phila. 34, Pa. • St. Catharines, Ont., Can.



DYE STICKS

Since 1900 we have made high quality true-form over-seasoned dye sticks for all standard machines. We can fill your needs today to meet any requirements. Write

FRANK BAILEY Cedar Brook, N. J.

THE McPHERSON COMPANY

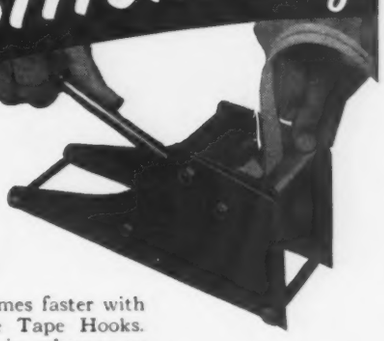
GREENVILLE • SOUTH CAROLINA

MCO

Industrial Engineers

INDUSTRIAL SURVEYS • PLANT SITE INVESTIGATIONS • PLANS
COMPLETE PLANT DESIGNS • APPRAISALS • VALUATIONS • LABOR
SAVING STUDIES • RESEARCH & REPORTS • PROCESS ANALYSIS

10 TIMES FASTER THAN STITCHING!

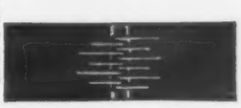


SPINDLE TAPE LACING EQUIPMENT

Lace spindle tapes 10 times faster with Clipper No. 25 Spindle Tape Hooks. Tapes can be prepared in advance so frame is shut down only long enough to place new tape on the pulleys and join ends with connecting pin. Tapes run true—last longer—run smoother—require less tension—VIBRATION IS ELIMINATED

CONDENSER TAPE LACING EQUIPMENT

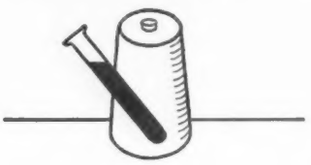
Lace condenser tapes with Clipper No. 25 Condenser Tape Hooks. Clipper laced tapes, prepared in advance, can be installed in a fraction of the time required for endless tapes. Tape may be purchased in the roll at considerable saving.



CLIPPER BELT LACER COMPANY, GRAND RAPIDS 2, MICHIGAN

Clipper UL
BELT LACING EQUIPMENT

Concordia-Gallia
CORPORATION
MODERN THROWING COMPANY DIVISION



Commission throwsters to the hosiery, weaving, knitting, lace and other industries...laboratory controlled processing of Rayon, Nylon, Silk, Fortisan and other yarns.

General and Sales Offices:
1400 Broadway, New York 18, N.Y. • CHickering 4-0660
MILLS A & B—Bethlehem, Pa.

CREAMSOL
TEXTILE SOFTENER
Creamsol . . . concentrated stearic Softener . . . Ideal for Bleached Goods but an excellent all-around Softener . . . Imparts Soft, Pleasing Handle.
BURKART-SCHIER CHEMICAL CO.
CHATTANOOGA, TENNESSEE

• PROCESSING METHODS
• PLANT LAYOUTS
• MATERIALS HANDLING
• MANUFACTURING CONDITIONS
• CONTROLS FOR MACHINES SUPPLIES WASTE QUALITY MAINTENANCE
• ADMINISTRATIVE ROUTINES

WERNERTEX P. O. M. CO.
60 E. 42nd ST., NEW YORK, N. Y.
Consultants to the Textile Industry

Mass., for construction of a $90,000 mill building.

Beaver Creek Weaving Co., Boonville, N. C., has begun erection of a 50 x 155 ft., one-story mill. W. C. Burcham, formerly of Chatham Mfg. Co., Elkin, N. C., heads the company.

Cotwool Mfg. Co., Lewiston, Me., has been authorized by CPA to proceed with construction of a $100,000 woolen mill in Lisbon Center, Me., and a $35,000 plant in Lewiston.

Dartmouth Woolen Mills, Claremont, N. H., has let contracts for the $250,000 mill to be built this year. The building will be 500 ft. long, with width tapering from 200 to 100 ft. It should be ready for use in January, 1947. New machinery will be ordered.

Deering Milliken & Co., New York, N. Y., has completed plans for construction of a worsted mill having 100,000 sq. ft. of floor space in McCormick, S. C. The new mill will be known as McCormick Spinning Co., Inc. The windowless plant will be air conditioned and have fluorescent lighting. Ten thousand spindles for long draft spinning will be installed, along with complementary machinery. Plans call for completion in four months. Daniel Construction Co., Greenville, S. C., will build the plant. Horace W. Kiser, who has been manager of Abbeville Mills, Abbeville, S. C., will manage the new mill.

Gilsum Woolen Mills, Gilsum, N. H., was recently purchased by Jacques Cipoth, New York, N. Y. E. C. Hayes is superintendent of the plant.

Gordon Woolen Mill, Newport, N. H., has been purchased from Parker Wilder Co., New York, N. Y., by Gordon A. Brown, president of Homestead Woolen Mills, West Swanzey, N. H., and associates. Lawrence Ellis has been named manager of the mill and Alfred E. Guidotti, superintendent. Mr. Ellis will also remain manager of Dartmouth Woolen Mill, Claremont, N. H., which is owned by Homestead.

Halifax Worsted Mills plan to open a new plant in Halifax, Va.

Homestead Woolen Mills, Inc., West Swanzey, N. H., has been authorized by CPA to proceed with construction of a 60 x 100 ft., three-story mill.

Lone Star Woolen Mills, San Marcos, Tex., has been sold to Maurice Brown and Milton Nussbaum, operators of several mills in the vicinity of Paterson, N. J.

St. Mary's Woolen Mfg. Co., St. Mary's Ohio, plans a $100,000, one-story addition to be equipped with looms and accessories for increased capacity. A new boiler house is contemplated.

Webster Textiles, Laconia, N. H., a new company, has started operations and is making women's worsted and synthetic dress goods.

Rayon & Silk Mill News

American Viscose Corp. spent $1,372,000 during the first quarter of 1946 for new plant and equipment. The new plant at Front Royal, Va., is nearly complete and is already producing rayon yarn and staple fiber at the annual rate of over 100,000,000 lb. The annual capacity of the Nitro, Va., viscose staple fiber plant is being increased by 27,000,000 lb. The company will increase its rayon production by about 100,000,000 lb. annually through expansion which is either already in progress or is being contemplated. The plant at Radford, Va., alone will produce about 55,000,000 lb. Current total output of 260,000,000 lb. a year will be increased to about 1,500,000,000 lb. by 1955.

Associated Textiles of Canada, Ltd., Luisville, Que., is nearing completion on its new weave shed. The completely air-conditioned building will house 460 looms, 320 of them new.

Canadian Celanese, Ltd., Drummondville, Que., has authorized an expansion program, including additional buildings and equipment to cost about $2,500,000. Work is scheduled to begin soon.

Celanese Corp. of America has added $5,000,000 to the previously authorized $10,000,000 construction cost of the plant which is to be built near Rock Hill, S. C. The company is also spending $1,000,000 to expand its plant in Burlington, N. C.

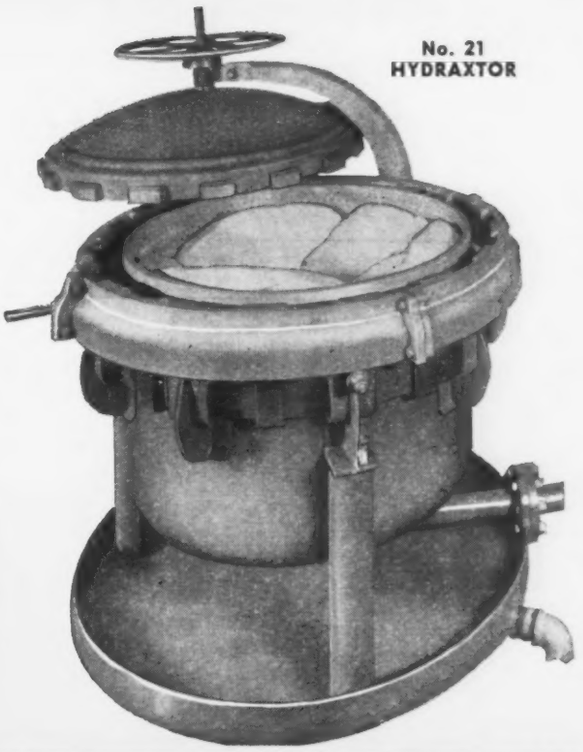
Celanese Lanese Corp., Burlington, N. C., will increase to $1,000,000 the $750,000 originally allotted for expansion of its operations. Exterior work on a 2½-story addition is near completion, and the entire expansion program may be completed by the end of 1946.

Chicopee Mfg. Corp., Cornelia, Ga., is nearing completion

New ZEPHYR HYDRAXTOR

AVAILABLE now!

RADICAL *in design*
STARTLING *in performance*
SIMPLE *in operation*
LARGEST *in capacity*



No. 21
HYDRAXTOR

HYDRAXTOR HIGHLIGHTS:

Remarkable time and labor saver—field tests prove 50% to 75% time savings per extractor load; actual loading and unloading time only 30 seconds each; cycle of operation 8 loads per hour • No noise or vibration • Absolute safety • Easy to install and maintain • Never needs balancing • No moving parts • Minimum horsepower required • Small standard motors • Cannot tear or damage clothes • No hard dried extractor wrinkles • Uniformly successful on all types of work.

The New Zephyr HYDRAXTOR Represents the First New Method in the Extracting Field for the Past 50 Years

Fully Protected by World-Wide Patents

ZEPHYR
LAUNDRY MACHINERY COMPANY
2034-54 W. FULTON STREET, CHICAGO 12, ILLINOIS

MURDOCK Bobbin Holders

Two exclusive features Affording Long Life

1. Automatic-bobbin holders equipped with holding wings electrically hardened all the way through.
2. Holding wings hold positively in position by skeleton washer—no sliding around.

We make holders for ¾" to 2½" bobbin heads, including large-package wood and paper bobbins, also special bobbins. Duplex holders take both automatic and non-automatic bobbins.

Holders for all types of mules, frames, twisters and winders.

MURDOCK & GEB CO., Franklin, Mass.
Manufacturers of Bobbin Holders for Over Fifty Years

DAVIS AND FURBER

Earn a Manufacturing Profit By Using the Best Machinery and Supplies

DUSTERS
PICKERS
CARDS
MULES
WOOLEN SPINNING FRAMES
SPOOLERS
DRESSING FRAMES
NAPPERS
CARD CLOTHING
NAPPER CLOTHING
GARNETT WIRE
LEATHER RUB APRONS
LEATHER CONDENSER TAPES

DAVIS & FURBER
NORTH ANDOVER, MASS.

THE ACCEPTED STANDARD

OSCAR HEINEMAN CORPORATION

Progressive Processors of

NYLON, SILK and RAYON YARNS For the Hosiery and Knitting Trades

QUALITY PRODUCTS FOR OVER FIFTY YEARS

We are equipped with the latest developments in processing machines, assuring continuous production of highest standards of workmanship.

For best results have your yarns processed by

HEINEMAN

2701 Armitage Ave. Chicago 47

C. D. Gott Company
3303 Brainerd Road
Chattanooga, Tenn.

Pen Wilson
617 Johnston Bldg.
Charlotte, N. C.

TIR

TEXTILE INDUSTRY RESEARCH

INCORPORATED

NEW YORK, N. Y.

CONSULTANTS ON TEXTILE MANUFACTURING AND MACHINERY

10 East 40th Street Murray Hill 4-0525

PLURAMINE DT 100%

(Patent applied for)

A high grade cationic finish for rayon goods. Minimum Shade Variation. Superior Lightfastness High Chlorine Resistance

Write for information and sample.

KEARNY MANUFACTURING COMPANY, INC.

KEARNY, N. J. KMC PRODUCTS GREENVILLE, S. C.

MONTREAL MEXICO SAO PAULO BUENOS AIRES ANTWERP

on its Lumite plant, which will use conventional textile mill equipment, with innovations, to weave Lumite fabrics and insect screens.

Duplan Corp. has started a $450,000 expansion program at its spinning mill in Lincolnton, N. C. A 105 x 275 ft., two-story building is being built to house 200 looms. The company has another expansion in progress at Winston-Salem, N. C., where a large nylon throwing mill is being built. This addition will double the capacity of the existing plant there.

Hess, Goldsmith of California, Inc., Pomona, Cal., is having its $250,000, 100 x 160 ft., one-story plant built by Austin Co., Los Angeles.

Melton Mfg. Co., Fall River, Mass., recently chartered with capital of $100,000, plans operation of a mill to make rayon specialties. Joseph List is president.

Stockholm, Sweden—A new rayon plant with an annual capacity of 1,800 tons will be erected by A. B. Cellull. This firm, which is jointly owned by the Kooperativa Foerbundet and a group of Swedish textile mills, plans to acquire from Courtauld's, Ltd., the production rights in northern Europe for the continuous process developed by Industrial Rayon Corp., Cleveland, Ohio.

Synthetic Yarns, Inc., Lowell, Mass., has been incorporated with capital of $100,000 to operate a mill for processing rayon and other synthetic yarns and threads. Harold F. C. Wilcox is president.

Textron, Inc., Providence, R. I., will embark on an expansion program in its Manville division which will increase the number of employees by 800. Additional looms and other machinery will be installed. The company is also negotiating for the purchase of a group of buildings in Warwick, R. I., with the intention of entering the warp-knit field.

Vogue Mills, Gaffney, S. C., have purchased for $100,000 the plant and mill village of the former Irene Mfg. Co. Vogue Mills make rayon bedspreads and housecoats.

Knitting Mill News

Asheworth Bros., Inc., Greenville, S. C., will begin immediate erection of a new one-story hosiery mill, reported to cost $60,000, with equipment. Contract has been awarded by Blythe & Isenhour, Inc., Charlotte, N. C.

Baker Mills, Crouse, N. C., plans to move to Clover, S. C. The company has purchased one large building and leased another to be used for spinning and knitting.

Carpenter Hosiery Mills, Wytheville, Va., has been chartered with capital of $500,000 to manufacture yarns and hosiery. Albert B. Carpenter is president and treasurer of the company.

Clark Mills, Jackson, Ala., will get work under way shortly on a 17,000 sq. ft. addition to house the knitting and cutting departments.

Culpepper Hosiery Mills, Dunn, N. C., has started construction and expects to begin operations in about 90 days. Owners and operators of the mill are C. H. Culpepper, Jr., and Fred Farley, Jr., of Danville, Va.

Denver, Pa.—Karl and Erich Hemmerich have purchased an eight-acre plot of ground on which they will establish a full-fashioned hosiery mill. Building operations will begin as soon as Federal regulations permit. Orders for six 51-gage machines have been placed, and additional equipment will be bought.

Albert F. Garrou & Son, Inc., Valdese, N. C., has begun construction of a new hosiery mill. Plans call for the plant to be in full production within 90 days, with a capacity of 1,000 doz. pr. of hose per week.

Gilison Knitwear Co., Hicksville, L. I., is building a one-story plant which will contain 26,000 sq. ft. of floor space. Equipped with new machinery, the plant will be ready for operation by July 1.

Lynchburg Hosiery Mills, Inc., Lynchburg, Va., has received approval from CPA for a $289,000 addition to its plant.

Macungie Hosiery Mills, Inc., Philadelphia, Pa., a newly formed company, will locate its mill in Macungie, Pa. A one-story building is nearing completion, and operations are expected to begin in about a month. Ten full-fashioned machines will be installed when the building is completed. Two additional plants are expected to be opened soon, one in New Jersey and the other in Pennsylvania. The company is headed by Samuel I. Martin and Frank H. Burd.

Of Time and Knitting Machines

Today Scott & Williams faces the greatest demand for circular knitting machines in its eighty-one years of history. To meet this demand our plant capacity is being greatly expanded. A fresh supply of skilled craftsmen is being trained in knitting machine building. New war-earned knowledge and experience are being applied to our manufacturing methods. However, a few facts regarding knitting machine manufacture will explain why full production cannot be achieved immediately.

First, a knitting machine is an extremely complex and delicate piece of industrial equipment. For example, all S & W models combined require more than 6,000 different parts, not counting duplicates. Many of these are extremely small and must be fashioned with great accuracy to assure precision operation over many years. Second, assembly and testing are necessarily time-consuming operations. In a standard machine, there are over 160 sub-assemblies. Many hours of actual knitting tests are given each machine. Third, much of S & W's equipment is developed and built by the company itself, since no machine tools exist that are adaptable to some of S & W's special requirements. Time, of course, is needed to produce such equipment.

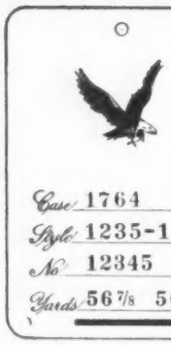
Yes, knitting machine manufacturing is exacting, time-consuming work. But S & W is making every effort to supply *you* at the earliest possible moment with the modern machines you need to best serve your trade.

SCOTT & WILLIAMS, INC.

Main Office and Factories: Laconia, New Hampshire

Sales Offices: Empire State Building, New York 1, New York

Divisional Offices: High Point, North Carolina • Reading, Pennsylvania • Chattanooga, Tennessee



The New AMERICAN SPEED SET GEAR CONSTRUCTION NUMBERING MACHINES

Designed Especially For

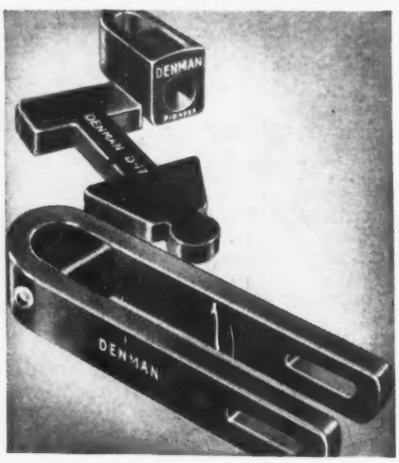
MARKING TEXTILE MILL TAGS TICKETS, LABELS, Etc.

Modern textile merchandising demands CLEAR, EASILY READ piece, lot and case numbers, size and yardage lengths, etc. Supply this demand and use the new American Speed Set Gear Construction Numbering Machines. Such numbering with Speed Set machines can be done quickly and easily. Numbers change instantly with touch of fingers and ANY COMBINATION OF NUMBERS can be quickly obtained. All steel wheels, deeply engraved figures, self inking.

Eliminate errors and see that your tags, tickets, labels, etc., are attractively and legibly numbered the SPEED SET way. WRITE TODAY FOR FOLDER describing these new machines used in Cotton, Woolen, Hosiery, Knit Goods, and Dyeing and Finishing plants.

American Numbering Machine Co.

ATLANTIC & SHEPHERD AVES. BROOKLYN 8, N. Y.



DENMAN

PICKERS LUG STRAPS

HOLD-UPS

Lowest Cost Per Loom Per Year

The Terrell Machine Co., *Inc.*

CHARLOTTE, N. C.

James F. Notman, Needham, Mass. . . . . N. E. States
E. W. S. Jasper, Inc., Elizabeth, N. J., Penn., N. Y. and N. J.
W. J. Westaway Co., Ltd., Hamilton & Montreal . . Canada
Geo. Thomas & Co., Manchester, Eng. . . European Agent

NEWS ABOUT MILLS

Morristown Knitting Mill, Morristown, Tenn., has plans under way for expansion of its branch plant in Dandridge, Tenn., which will double production.

Native Lace Works, Inc., an affiliate of Native Laces & Textiles, Inc., New York, N. Y., has purchased a 16-acre plot of land in Dallas Township, Pa., for the erection of a $475,000 mill.

New York, N. Y.—Moe Sorkin, formerly with S. Fromm, Brooklyn, N. Y., and Jonette Knitting Mills, New York, has organized a mill at 42 W. 38th St.

Penman's Ltd., Paris, Ont., is considering opening a branch mill in Ingersoll, Ont.

Porter Mills, Inc., Cullman, Ala., newly organized, has leased a building and is installing machinery to make infants' underwear.

Propper-McCallum Hosiery Co., Florence, Mass., has begun a modern addition to its plant. The new building will permit the company to locate all processes except finishing in Florence.

Service Mills, Inc., Duncansville, Tex., has begun operations in its new mill. This is the first of four mills to be built within 50 miles of Dallas. The plant is equipped with 50 seamless hosiery machines. John P. Hall is president.

Shelton Hosiery Co., Shelton, Conn., has commissioned Leo F. Caproni, New Haven Conn., to draw plans for a 100 x 150 ft., two-story mill. Estimated cost of the project is $150,000.

Superspun Knitting Co., Joliette, Que., will alter and renovate a building to be used as a mill. L. Lougtin owns the company.

Vanity Fair Mills, Inc., Reading, Pa., plans a $500,000 expansion program, part of which is already under way, for its Alabama subsidiaries. The capacity of Clarke Mills, Jackson, Ala., will be doubled by the addition of 18,000 sq. ft. of floor space. C. M. Guest has the contract for this project. A new building is scheduled for Monroe Mills, Monroeville, Ala., for cutting, dyeing, and storing. No contract has yet been let for this project.

Westwood Knitting Mills, Inc., Los Angeles, Cal., has been formed with capital of $500,000 The new company is represented by Marcus, Rabwin & Nash, Los Angeles.

Wilson Hosiery Mill, Villa Rica, Ga., has opened a plant in Sand Hill, Ga.

York Knitting Mills, Ltd., Toronto, Ont., some time ago established a subsidiary, Unshrinkable Wools, Ltd., which is now operating at a limited capacity. The company is also modernizing its own knitting and spinning machinery. Purchases of new equipment in the current year will involve $500,000.

Dyeing & Finishing Plant News

Aspinook Corp., Jewett City, Conn., has purchased the land, buildings, machinery, and equipment of Hampton Co., Easthampton, Mass., for $7,000,000. The latter mill will henceforth be called Hampton Print Works and continue with the same organization and personnel.

Cadillac Warping & Sizing Corp., Hawthorne, N. J., has taken a five-year lease on the second floor of the United Piece Dye Works plant in Hawthorne, N. J.

Columbus Coated Fabrics Corp., Columbus, Ohio, plans to erect a $150,000, 100 x 200 ft. building next to its existing plant. The new building, expected to be completed in midfall, will be used as the coating section of the plant.

Electro Mechanical Fabrics Corp., Providence, R. I., has been chartered with capital of $50,000, to operate a fabric processing mill. Paul T. Cattiglioni, 419 Montgomery Ave., Providence, is principal incorporator.

Greenville Finishing Co., Greenville, R. I., is planning a 120 x 30 ft., two-story building and has received bids for construction.

Phillipsburg Textile Print Works, Phillipsburg, N. J., has bought Edgewater Dyeing & Finishing Co., Philadelphia, Pa., in a transaction involving $500,000.

Pocono Dye Works, Oxford, N. J., has been reorganized and is operating as Oxford Dye Works, Inc. Charles De Marco heads the new company.

Startex Mills, Tucapau, S. C. which recently doubled the size of its bleachery, is enlarging it further. The plant processes about 70,000 towels weekly.

Ready to Go... REGARDLESS OF RAIN

Thanks to AQUAROL

REG. U. S. PAT. OFF.

The ultimate in water-repellent finishes

AQUAROL is now available for civilian use for weather proofing fabrics, giving the same protection to the fabrics as given to our Armed Forces.

Mill men know that to specify Aquarol is to assure high water-repellent efficiency for overcoatings, ski suits, sport jackets and slacks and all kinds of rainwear fabrics.

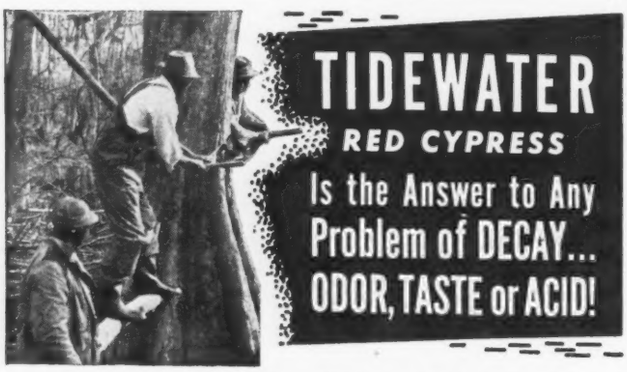
Aquarol will assure customer satisfaction and added sales value without increasing finishing costs.

Produced to meet government specifications during the war and now to meet the demand of the public.

ARKANSAS CO., INC.

Manufacturers of Industrial Chemicals For Over 40 Years.

NEWARK NEW JERSEY



...Its Superior Qualities Make It Ideal for a Wide Range of Industrial Uses

The Indians knew it, the Spaniards knew it, the French knew it, and those of English decent of the Southeastern regions have known for 150 years the superior qualities of Tidewater Red Cypress and its resistance to decay. Along the Atlantic Coastal Plain where lie buried cypress trees that grew over 100,000 years ago in the Pleistocene Age, many of which have since been dug up, give mute evidence of the lasting qualities of cypress never equalled for its decay resistance. In more recent years industry has also learned that it licks the difficulties of odor, taste and acid. Tidewater Red Cypress has ALL the qualities you demand for many specific industrial demands.

Tidewater Red Cypress
RED CYPRESS "The Wood Eternal"

CAN BE FURNISHED FROM ST. LOUIS STOCKS

FLEISHEL LUMBER CO.
4233 DUNCAN AVE. • ST. LOUIS 10, MO. • NEwstead 2100

NEWS ABOUT Men

George W. Stowe, Sr., has been named president of Alpine Cotton Mills, Morgantown, N. C. **Sidney Query** at the same time became assistant treasurer; **Wade F. Fowler,** general manager; and **A. L. Singleton,** superintendent.

John F. Evans has been appointed president of Richmond Piece Dye Works, Inc., and Fair Lawn Finishing Co., Fairlawn, N. J. He succeeds the late Charles H. Dimick.

Mortimer May has been elected president of May Hosiery Mills, Nashville, Tenn., succeeding the late Jacob May.

Frederick C. Dumaine, Sr., president of Amoskeag Co., Manchester, N. H., has been elected to the newly-created position of chairman of the board. **William B. Snow, Jr.,** has succeeded to the presidency.

Louis B. Strauss has joined La-Salle Knitting Mills, Inc., New York, N. Y., as president.

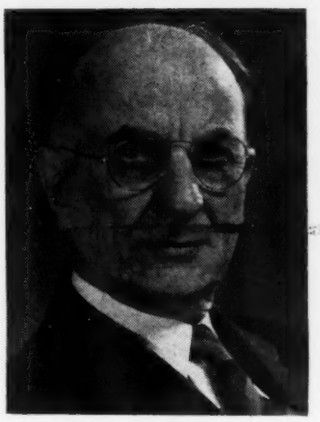
James Webb, formerly vice president of Eno Cotton Mills, Hillsboro, N. C., has succeeded **S. S. Paine** as president.

James A. Huff, Jr., has been elected president of Rockwood Mills, Rockwood, Tenn., succeeding his father. **Woods W. Huff** has become general manager of the company, and **W. H. Shambart,** vice president.

Robert L. Wentz, formerly assistant treasurer of Botany Worsted Mills, Passaic, N. J., has been named vice president in charge of production; **Nelson J. Rohrbach** has become vice president in charge of the products division; and **Jack Schmidt** has become secretary.

E. R. Van Vliet, formerly executive vice president in charge of finance and accounting for Tubize Rayon Co., has been named treasurer of Celanese Corp. of America.

C. B. Quinn, until recently controller of Textron, Inc., is now special assistant to **Royal Little,** president.



DR. FREDERIC BONNET has retired as director of American Viscose Corp's. Standards Department Marcus Hook, Pa., but will continue to serve the company as adviser to William C. Appleton, president. He will also continue his work in connection with a number of activities that he has been handling over and above the management of his department. Leroy S. Converse, who has been assistant director of the Standard Department since its organization in 1939, has been appointed to succeed Dr. Bonnet as director. For the present, Dr. Bonnet will continue as chairman of the "Crown" Tested Advisory Group, and will continue to represent American Viscose on technical societies and committees, and to give talks and technical papers, as he has done in the past. He joined the company in 1925.

Wm. W. Robinson, Jr., has been elected vice president and general manager of McCallum & Robinson, Memphis, Tenn. **Cooper Y. Robinson** was also made a vice president.

James A. Smyth, vice president of Balfour Mills, Hendersonville, N. C., has become superintendent, succeeding **W. E. Hammond,** retired.

Tom G. McLaughlin, formerly assistant treasurer of Wilkes Hosiery Co., North Wilkesboro, N. C., has been elected vice president; **Cecil F. Adamson** has become secretary and assistant treasurer; and **Russell G. Hodges,** previously chemist in charge of dyeing, is now assistant secretary.

THE QUALITY PRODUCT
Magic-Spun
BY UNITED YARN

UNITED
YARN PRODUCTS COMPANY

1450 BROADWAY · NEW YORK 18, N. Y.
285 STRAIGHT STREET · PATERSON, N. J.

For a "Happy Ending"

inject new life into your production picture by replacing worn, wavy rings with new easy starting, smooth running, high polish

Diamond Finish

RINGS FOR SPINNING AND TWISTING EVERY TEXTILE FIBRE

WHITINSVILLE (MASS.)
SPINNING RING CO.
Makers of Spinning and Twister Rings since 1873
DIAMOND FINISH

DANA WARP MILLS
Westbrook, Maine

Cotton yarns, single and ply
Cotton warps, single and ply
Colored yarns and warps
Spun rayon—yarns and warps
Seamless grain bags.

ALDON SPINNING MILLS
ALFRED W. CAVEDON

Spinners of Fine Woolen
Merino & Specialty Yarns

SELL DIRECT TALCOTTVILLE, CONN.

THE OLDEST AND LARGEST
MANUFACTURERS OF
Ring Spinning and Twister Travelers
In the UNITED STATES

American • Hicks • Wilson
United States Standard
Wentworth Double Duty
and Gravity Travelers

MAKES STRONGER YARN

National-Etartnap Finish
New Chemical Treatment
Write Us

National Ring Traveler Company
PHILIP C. WENTWORTH, Treas.
354 Pine St., Pawtucket, R. I.
P. O. Box 1565, Providence, R. I., Charlotte, N. C.

THOS. WOLSTENHOLME CO.
3300 Frankford Avenue, Philadelphia, Pa.

Yarns for All Purposes

French and English Spun Worsted
French Spun Zephyr
French Spun Merine

Representatives:—

Mr. Robert H. Perkins
99 Chauncey St.
Boston 11, Mass.

Mr. C. F. Poffer
The Merchandise Mart,
Suite 1076
Chicago 54, Ill.

Mr. Arthur Bone
4436 Worth St.
Los Angeles 33, Cal.

The **TABER ABRASER**

reveals *in advance* wear resistance

OF PROCESSED TEXTILES . . . COATED FABRICS

● "How long, under actual service conditions, will this or that fabric hold up?" The Taber *Abraser* will aid you in answering this question. Time consuming performance tests are not necessary. In your own laboratory you can measure comparative durability scientifically, obtaining a permanent wear value record for research or production control on all types of fabrics . . . cottons, woolens, rayons, silk and special mixtures. Used by hundreds of America's leading textile processors.

← **WRITE** for your free copy . . . Manual explaining the Taber Method and the reasons why it pays to pre-test.

TABER INSTRUMENT CORP.

111TW GOUNDRY STREET, NORTH TONAWANDA, N. Y.

Eastern Representative: ALFRED SUTER
200 Fifth Avenue, New York, N. Y.

The Taber Tests *Proves* What Wears Best

Let **Southworth**

Help You

Let Southworth help you in making your plans for extra Business and extra Profits. Get the increased production and lower costs made possible by SOUTHWORTH'S new, improved, TEXTILE HUMIDIFYING SYSTEMS.

A new SOUTHWORTH system will give you a simplified design that means better evaporation and more sensitive control combined with exceptionally flexible power.

Write Today For Complete Information.

Southworth **Machine Co.**

Textile Humidifying Systems

30 WARREN AVE. PORTLAND, ME.

NEWS ABOUT MEN

Turner Scott, superintendent of the twisting division at Martha Mills, Thomaston, Ga., succeeds **W. H. Gibson, Jr.,** as general superintendent. **J. M. Bartfield** has been named to Mr. Scott's former position.

C. S. Ghura, of India, is in this country for an extended stay during which he hopes to purchase textile equipment. He is making his headquarters at 10 West 33rd St., New York, N. Y.

D. E. Smith, formerly with Whitney Mills, Whitney, S. C., has joined Startex Mills, Spartanburg, S. C., as secretary and assistant treasurer. **Ernest Bagwell** has become overseer of the crash-weaving department, and **Odell Freeman** is overseer of the printing department.

Frank H. Jones has been named department head in charge of coating and suiting fabrics for the women's wear trade, by the worsted division of Pacific Mills, to succeed the late Andrew J. Walker. Mr. Jones was recently associated with the Conde Nast organization, specializing in textile promotion.

W. F. Christman has succeeded **R. C. Roberts** as manager of Monroe Mills, Monroeville, Ala.

James V. Richards has been appointed assistant manager of the Brooklyn, N. Y., plant of Bemis Bros. Bag Co.

J. E. Garvin, formerly plant manager for Burlington Mills Corp., Altavista, Va., has been appointed manager of the uptown department of Burlington headquarters at Greensboro, N. C. He was succeeded at Altavista by **J. S. Ballenger.**

Paul X. English, brigadier general now on terminal leave, has been appointed manager of the Meridian, Miss., plant of Artcraft Hosiery Co. He will have complete charge of full-fashioned and seamless hosiery production.

Heath O. Kennette has been named general manager of the Masslinn division, Milltown, N. J., of Chicopee Mfg. Corp. of New Hampshire.

Mrs. Florence S. Munson has been named secretary of Globe Knitting Works, Grand Rapids, Mich., to succeed the late Herman Liesveld, and also will continue as assistant treasurer.

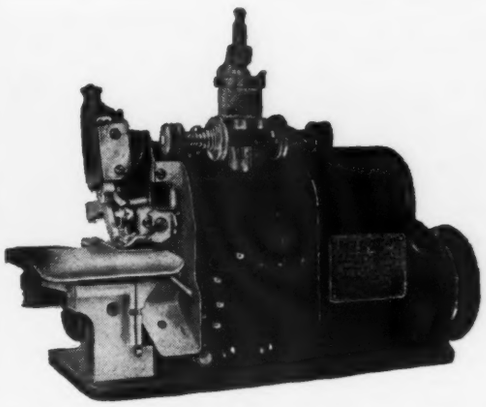
Horace A. Russ has been made manager of National Mallinson Fabrics Corp., formerly known as National Fabrics Corp., succeeding **E. E. Ruch,** resigned.

Dr. J. H. Moore, cotton technologist with the Agricultural Experiment Station of North Carolina State College, Raleigh, N. C., has resigned to become director of fiber research for Railway Supply & Mfg. Co., Cincinnati, O.

Frank W. Lockman, superintendent of the Lockhart, S. C., plant of Monarch Mills, has succeeded **N. Winroth** as general superintendent of Union Buffalo Mills, Union, S. C.

Louis S. Stroock, recently out of the Army, has been appointed assistant to the executive vice president of S. Stroock & Co., Newburgh, N. Y.

GEORGE STEVENSON (left) who has been appointed superintendent of finishing at Boger & Crawford, Philadelphia. Formerly with Ankokas Mills, Mount Holly, N. J., he has had 19 years experience specializing in package and skein dyeing and mercerizing. DR. ROY S. HANSLICK (right) who has been appointed director of chemical research in charge of the expanded research and development department of Boger & Crawford, Philadelphia. He was formerly senior chemical engineer for the U. S. Department of Agriculture in research and development.



Merrow Class A Machines, illustrated, have made possible quality production, high-speed and low operating costs to a degree greater than ever before. They are easy to handle, simple to adjust, sturdy in design, accurate in workmanship and readily adapted to many kinds of work. Let us or our distributor nearest you demonstrate the work of these machines on samples of your own fabric.

MERROW HIGH SPEED

OVEREDGING, OVERSEAMING AND HEMMING MACHINES

For Use on Knitted and Woven Wear of All Kinds

Quality Results—High Production

Convenient Handling

Minimum Time-Out for Adjustment

or Repair—Low Upkeep Costs

Obtain Maximum Quality Production by Using a Machine Suitably Arranged for Your Work—Our Distributors or Our Direct Representatives Are on Call to Advise You on Suitable Machine Arrangements for Various Results and Proper Care and Operation of Machine.

ESTABLISHED 1838 INCORPORATED 1894

THE MERROW MACHINE COMPANY

STARTING ITS SECOND CENTURY

2803 LAUREL STREET **HARTFORD 6, CONN., U. S. A.**

Acme Products

for seamless hosiery knitting

Speak for Themselves

Up-To-Date Machines
Needles

Economy Makers

ACME KNITTING MACHINE & NEEDLE CO.

FRANKLIN, N. H.

CRANE

KNITTING MACHINES

meet the needs for Speed—
for Quality and Low Cost

CRANE Knitting Machines meet the demands of rapidly changing patterns and styles. Their middle name is versatility . . . plus smooth, fast running operation that eliminates expensive stops. Among their exclusive features are patented hardened Wing Burr Wheels and patented Thread Stop Motion. There's many a Knitting Mill in which batteries of Cranes are the mainstay of production.

Let us tell you why —and how . . . just **WRITE**

1870 **CRANE** 1946

MANUFACTURING CO.
LAKEPORT, N. H.

Spring Latch Needle
KNITTING MACHINERY

Electronic

MOISTURE REGISTER

WITH NEW K-2 ELECTRODE

Tests flat, irregular and curved surfaced materials in 3 seconds or less

Here is the all-purpose moisture testing instrument you have been waiting for.

Each button of the electrode is individually spring-cushioned to allow maintenance of contact regardless of contour — no points to break off or injure surface. It is completely portable, and can be operated by anyone.

The same exacting scientific research and precise engineering development that have made L-2 (lumber) and V-2 (veneer) models of Moisture Register the standard in their fields make the new model K-2 an accurate, dependable addition to this famous line. Write today for complete information, specifying type of material and per cent range of moisture content you wish to test.— Moisture Register Co., Dept. G, 133 North Garfield Avenue, Alhambra, California.

Direct reading dial shows moisture content of:
Paper in Stacks or Rolls
Cloth in Bolts
Lumber
Plaster
. . . and many other materials

ELECTRONIC MOISTURE REGISTER
The Standard in MOISTURE TESTING FOR ALL INDUSTRIES

IMMEDIATE DELIVERY!

CHEMICAL SPECIALTIES

Detergents, Wetting Agents, Dyeing Assistants, Strippers
for
Cotton, Wool, Viscose and Acetate Rayons
Send for Laboratory Samples and Application Data.

W. P. BOLEN COMPANY

221-223 116½ South Church St., Charlotte, N. C.

We are equipped to produce chemicals to meet your individual requirements. Technical Service Without Obligation.

NOVELTY-YARNS

For

WEAVERS-KNITTERS

MONTGOMERY

WINDSOR LOCKS, CONN.

Designers and Spinners of Novelty Yarns

NEWS ABOUT MEN

W. G. Hicks was recently appointed general manager of Belding-Corticelli, Ltd., Montreal. He had previously been assistant general manager.

John A. Goodwin, Henry E. Thomas, and **George G. Armstrong, Jr.** have been appointed instructors on the faculty of Lowell Textile Institute, Lowell, Mass. Mr. Goodwin is a veteran of World War II, with several years service in the Mediterranean theater as an Army Air Force meteorologist. He will give instruction in several courses related to cotton manufacturing. Mr. Thomas has been with Deering Milliken & Co., Farnsworth Woolen Mills, Army Quartermaster Depot at Philadelphia, C. G. Sargent's Sons Corp., Graniteville. He will give instruction in engineering subjects as well as drafting. Mr. Armstrong has had 11 years experience with the United Elastic Corp. as a master weaver and will take over some of the weaving courses at the institute as well as give instruction in textile design. All three men are graduates of Lowell.

Dante J. R. Suffredini, treasurer-comptroller of La France Industries, Inc., Philadelphia, has been elected vice president of the Philadelphia Chapter of the National Association of Cost Accountants.

Alice Ten Eyck resigned on June 1 from her position as head of the consumer service program of the American Viscose Corp. She has been retained by that firm as consultant in the same field.

Edward J. Martin has been elected an assistant treasurer of John P. Maguire & Co., Inc., New York. Mr. Martin has just returned after serving in Navy.

Lawrence G. Weston has been appointed to supervise the cotton converting division and **David Aranow** to supervise and direct sale of fabrics to the coat, suit and allied accessory trades, of Manville Fabrics, the converting subsidiary of Textron, Inc., New York. Mr. Weston was for 10 years manager of the Ameritex division of Cohn-Hall-Marx Co., while Mr. Aranow has been sales director of that company's rayon division since 1938.

Miss Pau Tau Yuan, of Chungking, China, a director of the New Life Movement Spinning Factory, is studying operations of textile plants in North Carolina and expects to visit New York, Rhode Island, and Wisconsin to continue her studies.

GAYLORD DAVIS, who has resigned as member of the law firm of Cadwalader, Wickersham & Taft, to become general counsel, treasurer, and secretary of the American Enka Corp., New York.

Ralph V. Blackwood has been promoted from general superintendent to resident manager of Collins & Aikman Corp.'s Norwood, N. C., plant.

Stuart S. Littlefield, following termination of 45 months service with the U. S. Army, is now associated with Nashua Mfg. Co., Nashua, N. H., as a sales representative.

MacMillan Boyd was recently appointed general sales manager of Canadian Cottons Ltd., with head office in Montreal, succeeding **G. M. Bizzey** who has retired.

F. Albert Hayes has been appointed to the newly created position of director of purchasing of Bigelow-Sanford Carpet Co., New York. He is a former president of the National Association of Purchasing Agents. **William Murray,** purchasing agent, and **A. R. Showalter,** wool buyer for Bigelow-Sanford, will continue in their present capacities under Mr. Hayes' direction.

Arthur D. Rubino, recently released from Army duty, has returned to the executive staff of H. M. Hubshman & Bro., textile factors, in the new-business department, and will be located at Boston, Mass.

Carl F. Horten, after 26 months in the Navy, has rejoined the executive offices of Nashua Mfg. Co., Nashua, N. H., as assistant controller.

Miss Sara Sutton has been appointed as assistant to **J. F. Nicholl,** head of plastic fabrics development in the Lumite Di-

STEAM FINISHING MACHINERY

Standard Throughout the World

For finishing all types of knitted outerwear fabrics—tubular, flat knitted and woven.

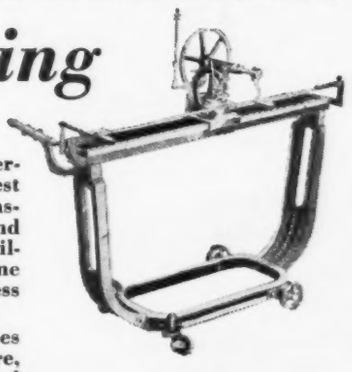
Kastrinsky designs and builds a complete line of a size and type to meet your requirements. These machines are easy to operate with unskilled labor and maintenance costs are low.

You can see them in operation in many of the largest plants in this country and abroad. Tell us your requirements—there's no obligation.

Established 1910

Kastrinsky Machine Co., Inc.
531 STONE AVE., B'KLYN (12) NEW YORK

Perfect Seams and Finishing



EVEN when operated by the lowest paid help, the Dinsmore No. 1 Hand Power Portable Railway sewing machine provides faultless seams.

This machine does its work anywhere, being easily moved about at will. It is an efficient practical means of joining the ends of cloth for its passage through such finishing operations as shearing, dyeing, printing, etc.

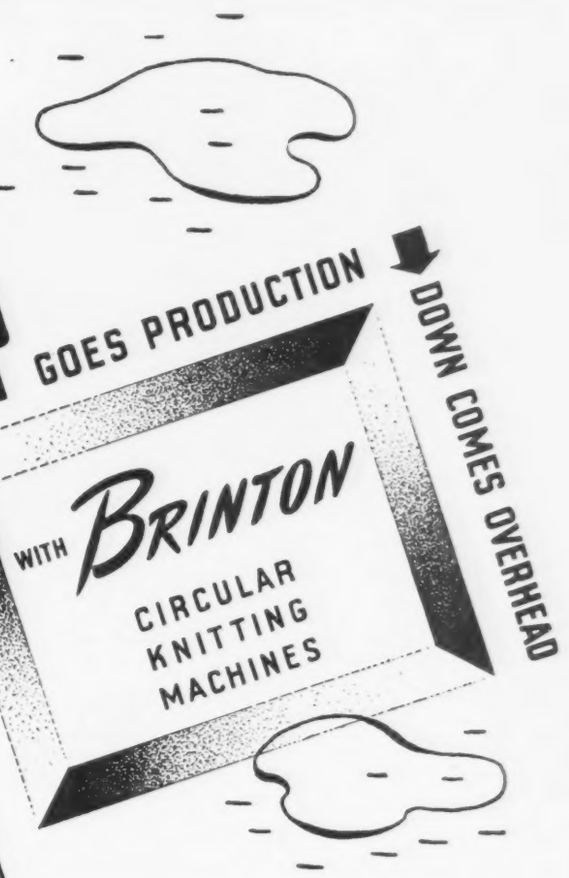
These machines will sew wet or dry, thick or thin goods, and are built in different lengths for any width of cloth.

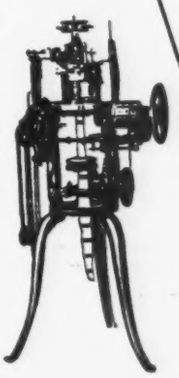
The seam can be sewed very near the edge and is easily removable. *The edges come out all even.*

Write for complete catalog.

DINSMORE MFG. CO.

No. 1 — See Also Textile World Year Book and Catalog — **SALEM, MASS.**



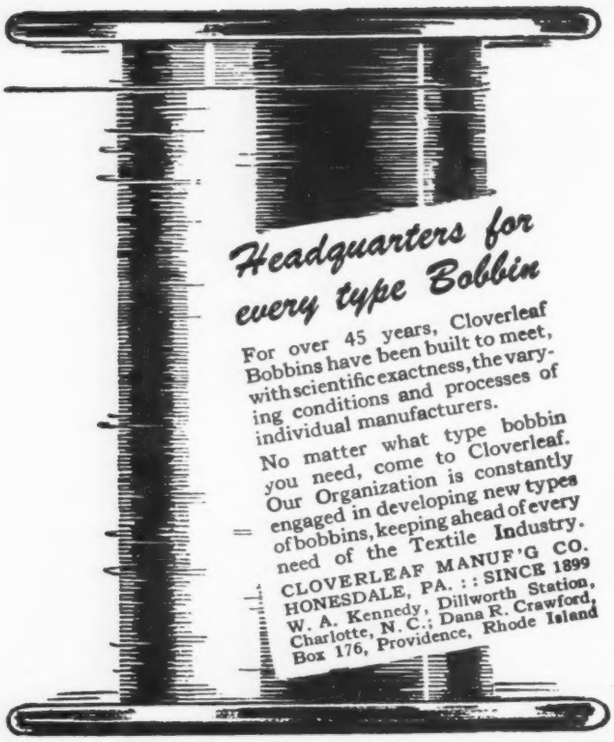


BRINTON Circular Knitting Machines keep quality high—increase production—lessen shut-downs—and reduce overhead. They keep on performing day after day—with a minimum of attention. That's why you'll find Brinton's in the largest mills, where accurate and scientific records are kept to tabulate the performance of every unit. • We have been making Brinton's for over fifty years, and will be happy to figure with you on your immediate requirements.

Your inquiry will bring full particulars.

BRINTON

3700 KENSINGTON AVE.
PHILADELPHIA 24, PA.


Headquarters for every type Bobbin
For over 45 years, Cloverleaf Bobbins have been built to meet, with scientific exactness, the varying conditions and processes of individual manufacturers.
No matter what type bobbin you need, come to Cloverleaf. Our Organization is constantly engaged in developing new types of bobbins, keeping ahead of every need of the Textile Industry.
CLOVERLEAF MANUF'G CO.
HONESDALE, PA. : : SINCE 1899
W. A. Kennedy, Dillworth Station, Charlotte, N. C.; Dana R. Crawford, Box 176, Providence, Rhode Island

CLOVERLEAF

Bobbins . . . . . .

J. E. SIRRINE & CO.

GREENVILLE • SOUTH CAROLINA

Engineers

ESTABLISHED 1903

TEXTILE MILLS • RAYON PLANTS • KNITTING MILLS • DYE HOUSES
BLEACHERIES • STEAM UTILIZATION • STEAM POWER PLANTS
WATER • WASTE DISPOSAL • APPRAISALS • PLANS • REPORTS

Due To Increased Manufacturing Facilities

DISTRIBUTORSHIPS

ARE AVAILABLE

for

Well established nationally known

SYNTHETIC DETERGENT & WETTING AGENT

for

Specific Use in Textile Processing

RW-697, Textile World
330 West 42nd St., New York 18, N. Y.

vision of Chicopee Mfg. Corp., New York.

George H. Blumenthal has assumed the new post of sales yarn development manager of Lion Brand Yarn Co., New York. Bernard Blumenthal, who was associated with the firm prior to his entering the service, has resumed his post as advertising manager after serving five years in the Army.

Stuart S. Littlefield joins Nashua Mfg. Co. as a sales representative after nearly four years Army service.

Margaret B. Hays, lieutenant S. C. (W) U.S.N.R., has been released to inactive duty by the Navy. She has gone to the Naval Air Experiment Station, Navy Yard, Philadelphia, to be in charge of the textile section of the materials division. While on active duty, Lieutenant Hays was stationed at the Naval Clothing Depot in Brooklyn as officer in charge of sales and survey.

George W. Murphy will be associated with Mary Leila Cotton Mill, Inc., Greensboro, Ga., as of June 1. He has served as sales engineer for H & B American Machine Co. with headquarters in Atlanta, Ga.

Ralph Donnelly has become superintendent of the yarn division at the Norwich, Conn., mill of American Woolen Mills.

Clarence White has become overseer of carding at Gibson Woolen Mills, Tilton, N. H.

Paul A. Koppe, Jr., is now superintendent of Cowan Mill, the Deering, Miliken & Co. unit at Lewiston, Me.

L. Karpess, certified public accountant, has joined Native Laces & Textiles, Inc., New York, as comptroller and assistant to **J. S. Lawrence,** treasurer of the organization and its affiliated companies. **Miss Helen Boyn** has become associated with Native Laces & Textiles, Inc., as consultant on style and design.

Fred Graichen, recently released from military service, has become styler for American Woolen Co. in the New York offices. Mr. Graichen was designer at the company's Fulton Mills before entering the service.

Obituary

Leroy A. Beers, 60, president of the Institute of Carpet Manufacturers of America, Inc., and an expert on wool marketing and research, died of pneumonia May 24 at his home in Douglaston, L. I., after a short illness. Born in Vernon, Conn., he joined the firm of John K. Stewart & Sons, manufacturers of knit underwear, in Amsterdam, N. Y. He was also treasurer of the Tryon Mills of Vermont, which pioneered in nainsook underwear. He later became interested in the aeronautical industry, and he was successively treasurer of the American Aeronautical Corp., Port Washington, L. I. and the Great Lakes Aircraft Corp., Cleveland. He joined the Institute of Carpet Manufacturers of America, Inc., in 1934 to compile a cost manual for the institute. He became vice president of the institute in 1936 and president in 1940, succeeding Herbert Gutterson. As head of the carpet institute he was responsible for a large volume of research and statistical work, and initiated a merchandising program which brought new life and coordination to carpet designing and selling.

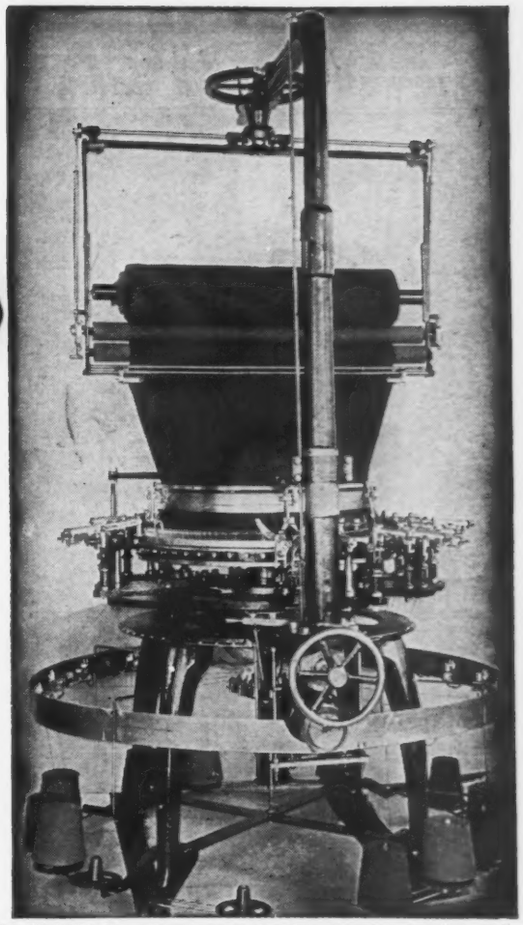
William Bishop Warner, 71, director and member of the executive committee of American Woolen Co. and at one time president, died recently at his home in Pelham, N. Y. He was also a director of the Van Raalte Co.

Theodore R. Plunkett, 64, former State Senator, of Adams, Mass., and a member of one of Massachusetts' leading cotton manufacturing families, died Apr. 13 after a long illness. A descendant of the founders of the Berkshire Mills in Adams, North Adams and Williamstown, he had been in charge of the Pownal (Vt.) division of the Berkshire Cotton Mills and assistant superintendent of the Adams mills, leaving the family concern to found the Greylock Mill Supply Co.

Andrew P. Howarth, 71, former proprietor of Andrew Howarth & Son, Co., Oxford, Mass., died at Worchester, Mass., on May 4.

Woolsey W. Weed, president of F. C. Huyck & Sons, Kenwood Mills, Albany, N. Y., died May 12. He joined the firm in

Single Head Spring NEEDLE Knitting Machine



PRODUCES 100 YARDS PER 8 Hr. DAY

The New S-1 Single Head Spring Needle Machine is especially designed for overcoating materials. At the same time, *any* fabric can be knit on it that is knit on the older type spring needle table!

Production is approximately 100 yards per 8 hour day, using 6 feeds.

Features: Electrical driven by V belt simplified motor drive . . . electrical yarnstop motion . . . and needle stop motion.

Install one of these machines today, and in a few hours after reaching the mill it will be ready for operation!

For details write us direct.

TOMKINS BROS. CO., INC.
ONEIDA ST. SYRACUSE, N. Y.

CAMACHINE 40-7
for inspecting winding, trimming and slitting of quilting materials.
GET FACTS !
WRITE FOR THIS FOLDER
CAMERON MACHINE COMPANY, 61 POPLAR ST., BROOKLYN 2, N.Y.

CAMERON MACHINE COMPANY 61 POPLAR STREET, BROOKLYN 2, N. Y.

THE LOYAL T. **IVES** COMPANY EST. 1874

SPRING BEARD KNITTING NEEDLES

For Circular, Full Fashioned, Tricot and Milanese Knitting Frames, also Narrowing, Stand, Transfer Points and Welt Hooks for Full Fashioned Machines. Slides, Sinkers, Jacks, Guides or Flat Eyes, Sley and Milanese Points, Transfer Points or Quills, etc.

Sheet Metal Specialties to Order

NEW BRUNSWICK NEW JERSEY

Machine and Hand Knitting

Yarns

[French-Bradford]

for

BATHING SUITS
OUTERWEAR
HOSIERY
UNDERWEAR

★

Complete color assortments

American Woolen Company

225 Fourth Avenue New York

AMERICAN

. . . more economical to use because . . . . it runs more efficiently, producing a finer quality product that can be sold easier and more profitably

AMERICAN
YARN AND PROCESSING CO
MOUNT HOLLY, NORTH CAROLINA

Mr. W. H. Suttenfield—Vice Pres. and Sales Mgr.

CHATTANOOGA, TENN.
Mr. W. H. Davenport
735 Chestnut Street

PHILADELPHIA, PA.
Mr. Wm. S. Montgomery
3701 N. Broad St.

HIGH POINT, N. C.
Mr. E. J. Holbrook

MOUNT HOLLY, N. C.
Mr. Edwin Hutchinson
Miss E. R. Abernethy
Mr. T. J. Davis

NEW YORK, N. Y.
Mr. Rowland Swallow
Empire State Bldg.

CHICAGO, ILLINOIS
Mr. E. W. Wood
222 West Adams St.

INDUSTRIAL ENGINEERS

Specializing in
TEXTILES FOR MORE THAN A QUARTER OF A CENTURY

RALPH E LOPER CO.

COST SYSTEMS WORK LOAD STUDIES
PAY ROLL CONTROLS
COST REDUCTION SURVEYS SPECIAL REPORTS

GREENVILLE S C FALL RIVER, MASS

"YOU CAN COUNT ON WAK COUNTERS"

They are
RUGGED
ACCURATE
DEPENDABLE

We build single, double and triple pick counters; yardage, rotary, ratchet and special counters.

Write—Phone—Wire

WAK INDUSTRIES
CHARLOTTE, N. C.

1917 and had been connected with the company continuously during the past 29 years. For 17 years, he was managing director of Kenwood Mills, Ltd., Arnprior, Ontario, Canada. On the death of Frank C. Huyck, son of the founder of Kenwood Mills, in 1938, Mr. Weed came to Albany as president and a director of the parent company.

George H. Lumb, 85, textile manufacturer and founder of the Lumb Knitting Co., Pawtucket, R. I., died May 18, at Pawtucket, R. I. With associates he also started the Blackstone Stocking Co., and he incorporated the Gledhill Co. and the Pawtucket Hosiery Co.

Benjamin F. Lister, 61, formerly president of Colored Worsted Mill, Providence, R. I., died at East Providence on May 22. He was a native of Newport, Ia.

John T. McManus, 57, vice president and general manager of the Lincoln Bleachery & Dye Works, Lonsdale, R. I., died at Pawtucket, R. I., on May 8.

Frank M. Kimble, president of Mandeville Mills, Carrollton, Ga. died recently in Carrollton, Ga. He had been with the Mandeville Mills for 23 years and had been president since 1941.

George W. Kritler, 59, president of Prudential Worsted Co., Philadelphia, Pa., died Apr. 19.

Harold J. Krantz, president of Reliance Dyeing & Finishing Corp., Covington, Ky., died recently.

Emilio DiBona, 59, died Apr. 18 in Philadelphia. He was president of Ellsworth Dyeing Co., which he founded 24 years ago.

James G. Blauvelt, 75, who had been president of the Hohokus Bleachery, Hohokus, New Jersey, died May 10, at Ridgewood, N. J.

James Kurnicki, 85, died recently in New York City. He was familiarly known as "dean of the curtain industry." He was one of the organizers of the original New York Upholstery Association, and at one time was associated with Atlas Curtain Co., Fall River, Mass.

Everett E. Salisbury, 80, agent of Atlantic Mills, Providence, R. I., died May 13 at the mills. He had been associated with the company 61 years. He was also a vice president and director of the Old Colony Cooperative Bank.

William J. Jennings, identified with North Carolina textile interests for 50 years, and a resident of Gibsonville for 40 years, died April 22. He was associated with Lawrence S. Holt & Sons, L. Banks Holt interests and Minneola Mfg. Co., Gibsonville. For two terms he was chairman of Northern North Carolina and Virginia Section of the STA.

Charles R. Wilcox, 62, textile engineer for Riggs & Lombard, Inc., Lowell, Mass., died in Maynard, Mass., recently. He was employed for a number of years in the mechanical department of the Assabet Mills of American Woolen Co., Maynard, and later with the James Hunter Machine Co., North Adams, Mass. He was also transmission engineer for Gates Rubber Co., Boston, Mass.

Jeremiah J. O'Neill, 75, an overseer in the Pemberton Mill prior to his retirement, died recently in Lawrence, Mass.

Ernest A. Pierce, 66, operator of a wool waste and yarn business for many years until his retirement last September, died Apr. 16 in Providence, R. I.

John H. Simpson, for 12 years head of the finishing department of Rock Hill Printing & Finishing Co., Rock Hill, S. C., died recently in Rock Hill, S. C. Mr. Simpson went to Rock Hill from Fall River, Mass.

John C. Inge, vice president and sales manager for A. M. Tenney Associates, New York, died recently in Ridgewood, N. J. Mr. Inge was one of the pioneers of the rayon industry in the United States.

William E. Paton, 79, for many years with Paton Mfg. Co., Sherbrooke, Que., founded by his father, in 1855, died recently in that city.

Gerard B. Cloran, 38, manager of the advertising and sales promotion department of National Starch Products, Inc., New York, died recently in New York.

Courtenay Guild, sole partner in the firm of Curtis Guild & Co., owner and publisher of the *Commercial Bulletin* and editor of the publication since 1914, died recently in Boston, Mass.

RAPIDASE

for de-sizing cottons, rayons and mixed goods

•

Assures rapid, dependable de-sizing.

•

Our technical staff always at your service.

•

WALLERSTEIN COMPANY, INC.
180 MADISON AVENUE • NEW YORK 16

Your Standard Specification for Silicates

STANDARD

INSURES SATISFACTION

ALKALI

DIAMOND ALKALI COMPANY
STANDARD SILICATE DIVISION
GENERAL OFFICES: PITTSBURGH, PENNSYLVANIA
Plants at CINCINNATI · JERSEY CITY · LOCKPORT, N.Y. · MARSEILLES
DALLAS, TEXAS

D. R. KENYON & SON
RARITAN, N. J.

MACHINERY
TENTERING
and DRYING

ROME SOAP MFG. CO.

WRITE US FOR SAMPLES AND QUOTATIONS

MANUFACTURERS OF
Textile, Laundry
AND
Special Soaps

ROME, N. Y.

ALL STEEL
ECONOMY
BALING PRESSES

ALL SIZES FOR ALL PURPOSES
LARGEST LINE BUILT IN U.S.A.

ECONOMY BALER CO., DEPT. J ANN ARBOR, MICH., U.S.A.

REPRESENTATIVES:
New York Office: 100 Gold St.
Philadelphia Office: Drexel Bldg.
Terrell Machine Co., 1200 No. Church St., Charlotte, N. C.
Boston Office: 601 Atlantic Ave.
Other Sales and Service Branches in most Important Cities

SEARCHLIGHT SECTION

WANTED

Knitter Mechanic

Must have experience on Leighton machines and general knowledge of other machines used in the sweater industry. Plant located 100 miles from N. Y. City. Apply by letter stating all details.

P-689, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED

CONSULTING EDITORS

ON

Hosiery, Outerwear, Underwear

Monthly retainer fee for: (1) technical man experienced in all types of men's, women's, and children's circular hosiery; (2) technical man experienced in all types of knitted outerwear and underwear. Both are spare-time jobs which involve planning of editorial content and writing and securing manuscripts for publication in prominent textile magazine.

P-639, Textile World
330 West 42nd Street, New York 18, N. Y.

TEXTILE ENGINEER

National Merchandising Organization has position open for cotton and synthetic yarn and fabric development engineer. Applicant should have technical training and 10 or 12 years of practical production and cost experience with manufacturers who spin, weave, dye, and finish cotton or rayon materials, or both. Position located in Chicago. Replies confidential.

P-698, Textile World
520 North Michigan Ave., Chicago 11, Ill.

TRICOT

Machine foreman or fixer. Permanent position, good pay, excellent possibilities for advancement. Write give age and experience.

P-725, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED

Knitting Machine fixer with latch needle experience and knowledge of Scott & Williams, Brinton & Wildman Machines. Wanted by large upstate New York Underwear Manufacturer. State experience. All correspondence confidential.

Write **P-685,** Textile World
330 West 42nd St., New York 18, N. Y.

GENERAL SUPERINTENDENT

(woven woolen fabrics)

WANTED

. . . . with potentialities for plant managership, to direct manufacturing from raw wool to finishing for leading Eastern company, 3000-4000 employees.

Requires successful experience controlling sizeable operation to established quality, quantity and cost standards. Ability to "get production" but maintain good relations with organized labor essential.

Salary substantial

P-695, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED

TEXTILE ENGINEER

Familiar with design of Textile machinery and equipment. Permament position with future. Location New York City. Applicants state age, education, previous experience and salary desired. All replies confidential.

P-581, Textile World
330 West 42nd St., New York 18, N. Y.

POSITIONS VACANT

WANTED: MECHANICAL Engineer—Needed by large textile organization in the South, a Mechanical Engineer with college degree and several years plant experience in handling boilers, mechanical and maintenance problems. A real opportunity for the right man. P-705, Textile World, 330 W. 42nd St., New York 18, N. Y.

SEWING MACHINE Fixer wanted by very high grade knit underwear mill. Exceptional opportunity for an expert on Flatlock repairs. State fully and qualifications. P-706, Textile World, 520 North Michigan Ave., Chicago 11, Ill.

WANTED WORSTED Plant Manager and designer—piece-dyed men's and women's wear. 100 looms—mill situated in Canada. State technical and moral qualifications. Knowledge French language, salary wanted, apply P-707, Textile World, 330 W. 42nd St., New York 18, N. Y.

FIRST CLASS Experienced dyer wanted: Prefer man with experience on wool, cotton, and rayon, both in stock and piece dyeing. Franklin Process Stainless Steel stock dyeing machines and all modern equipment throughout plant. Excellent working conditions, good salary, will pay moving expenses. An unusual position for the right man. Must have good references as to ability and character. Write full details as to education, ability and previous employment. Midwestern mill. P-708, Textile World, 520 N. Michigan Ave., Chicago 11, Ill.

SELLING OPPORTUNITY OFFERED

MANUFACTURER'S REPRESENTATIVES of agencies wanted to sell a high quality of vibration control pads and mountings for use with textile machines of all types. These products reduce noise, personnel discomfort, and machine deterioration due to vibration of equipment. They have many applications, and have possibilities of wide distribution in large textile mills. Selling will be done to plant management or plant engineer. RW-709, Textile World, 330 W. 42nd St., New York 18, N. Y.

POSITIONS WANTED

THROWSTER: Nylon, silk rayon specialist on nylon hosiery tram. Age 38, 15 years experience at present employed with large hosiery mill, supt. of throwing plant, experienced on all makes of throwing machinery. Desires change in locality. PW-673, Textile World, 330 W. 42nd St., New York 18, N. Y.

SUPT. OF Knitting. 25 years experience. Now with New England mill. Would like to locate in South of Southwest. PW-710, Textile World, 330 W. 42nd St., New York 18, N. Y.

POSITIONS WANTED

TEXTILE ENGRAVER with twenty years experience in field of textile engraving and also full knowledge of installing pantograph machines. Age thirty-seven; married, location of employment immaterial. References supplied. PW-711, Textile World, 330 W. 42nd St., New York 18, N. Y.

FORMER SUPERINTENDENT: textile school graduate experienced on silk, rayon and cotton desires position as superintendent or assistant superintendent. PW-712, Textile World, 330 W. 42nd St., New York 18, N. Y.

JR. INDUSTRIAL Engineer, 24, veteran, AB math; MBA industrial management. Now doing time study, wage incentive, and production control in garments factory in eastern Pennsylvania. Desires similar position in New York or Philadelphia metropolitan area. PW-713, Textile World, 330 W. 42nd St., New York 18, N. Y.

TEXTILE ENGINEER, specialist in non-woven fabrics. 13 years experience in chemistry, dyeing and finishing of natural and synthetic fibers. 31 years of age, married, 2 children. PW-714, Textile World, 330 W. 42nd St., New York 18, N. Y.

KNITTER MECHANIC on Wildman Spring Needle machines first class machinist. Had seventeen years experience, rayon, cotton, acetate and designer for ladies underwear, pajamas etc. Had charge and upkeep of over one hundred machines. Can furnish references. PW-715, Textile World, 330 W. 42nd St., New York 18, N. Y.

(Continued on page 259)

TOP-FLIGHT ENGINEER

available for consultation or permanent position

Is this *the* man you are looking for—either as a consultant to your own management and engineers or in a top executive position?

After five years on a knotty war job this man is now re-surveying industry to determine his future status within its ranks. He possesses a rare combination of ability, imagination, initiative and breadth of character.

His more than 20 patents indicate his ability in research and development of new products and have familiarized him with patent investigation and follow thru.

He has had abundant experience gained in solving engineering, production and management problems in such basic industries as textiles, fuels, process industries, power and machinery manufacture. This experience includes plant layout, lighting, heating, air conditioning, tool and machine design, power production, distribution and special methods of use.

He is familiar with the newest materials and processes including plastics and other synthetics and the latest in metallurgical developments.

You can reach him by writing—

PW-683, Textile World
330 West 42nd St., New York 18, N. Y.

SPUN RAYON SPECIALIST AVAILABLE

Top rank experience, blends, mixtures, fabric development, production direction, American, highly capable, self reliant executive, fully familiar with modern management methods. Now doing outstanding job, good reason for change.

PW-682, Textile World
330 West 42nd St., New York 18, N. Y.

OPPORTUNITY WANTED

Philadelphia Textile School Graduate. 7 years technical and practical experience. 5 years machine design, engineering and production. A combination of this experience in the textile machine field is desired. Philadelphia vicinity preferred.

PW-702, Textile World
330 West 42nd St., New York 18, N. Y.

Over Forty-five Years of Dependable and Confidential EMPLOYMENT SERVICE

for textile mills, converters and selling houses requiring managers, superintendents, stylers, designers, salesmen, overseers, second hands, fixers, etc. 'Phone, wire or write us your personnel requirements.

CHARLES P. RAYMOND SERVICE, Inc.

Phone: Liberty 6547 — 294 WASHINGTON STREET, BOSTON 8, MASS.

SEARCHLIGHT SECTION

POSITIONS WANTED
(Continued from page 258)

WEAVING EXECUTIVE: Experienced on plain and fancy yarn, piece dyed goods, in silk, rayon, nylon, cotton, mohair and blended yarns on broad goods, pile and plastic fabrics, expert knowledge of automatic looms, wants steady position with reliable firm. PW-529, Textile World, 330 W. 42nd St., New York 18, N. Y.

TEXTILE SUPERINTENDENT: Executive. College graduate, professionally trained in business and textile schools, ten years executive experience. Specialization in the manufacture of silk and synthetic yarns, broad cloths, and narrow fabrics designing, analytical chemistry, and cost estimation. Experienced in labor relations, capable of taking responsibility for medium sized production organization. Prefers position in Pennsylvania or New York area. PW-716, Textile World, 330 W. 42nd St., New York 18, N. Y.

SELLING OPPORTUNITY WANTED

SWISS IMPORTER wants representation of American textile manufacturers. W. Hautle, St- Laurent 19, Lausanne, Switzerland.

TEXTILE SPECIALIST: very well introduced in the whole of Scandinavia, with first class references, seeks representation. Paul Fraenkel, Jacob Erlandsensgade, 5, Copenhagen, Denmark.

CONTRACT WORK

GIRDLE KNITTING mill wishes contract work on one or two way stretch. CW-631, Textile World, 330 W. 42nd St., New York 18, N. Y.

NEEDLE SQUARING Wanted. Tricot, milanese hosiery, insides squared. Units already casted for squaring accepted at once will be equipped for castings of units in near future. CW-717, 330 W. 42nd St., New York 18, N. Y.

BUSINESS OPPORTUNITY

MANUFACTURER HAVING outstanding cotton dress item wishes permanent tie-up with mill on low-end cotton goods up to $.23 a yard. Will advertise your material along with our product. Contracts on piece goods can start at once or 6 to 9 months hence. BO-719, Textile World, 330 W. 42nd St., New York 18, N. Y.

WANTED

COTTONS WANTED: printed or plain, also greige goods. Can furnish second quarter CC priorities. W-718, Textile World, 330 W. 42nd St., New York 18, N. Y.

DUTCH & SCANDINAVIAN REPRESENTATION

Import—and Export Agency, with first-class references and excellent contact on Dutch and Scandinavian Market, desires Agency, acting as a buyer or on a commission basis, of industrial raw-materials, dyeing colors, textile goods, and machinery. Short term deliveries desired, if possible. Write under . . .

RW-699, Textile World
330 West 42nd Street, New York 18, N. Y.

WANTED

SALESMEN

Expansion of chemical plant offers opportunity for salesmen with a following and experienced in selling synthetic detergents and wetting agents to the textile industry. Nationally known product. Excellent commissions.

SW-696, Textile World
330 West 42nd Street, New York 18, N. Y.

PROFESSIONAL SERVICES

LANCASTER, ALLWINE & ROMMEL
Registered Patent Attorney

Booklet—"General Information Concerning Inventions — Patents" and "Fee Schedules" sent without obligation.

Patents—Copyrights—Trade-Marks
Suite 448, 815—15th St., N.W., Washington 5, D.C.

MODERN ENGINEERING CORPORATION
Consulting Engineers

Industrial Power Surveys—Electric, Steam, Water, Air Layouts—Heating & Ventilating—Special Electric Circuits—Plant Modernization—Alterations—Power Surveys—Investigations & Reports.
Inquiries Invited
154 Nassau St., New York 7, N. Y.

WATSON and HART
Engineers

Industrial Plants, Foundations and Soil Studies, Mechanical and Electrical Installations, Overhead and Underground Electrical Distribution, Water Works and Sewerage.

Designs, Reports, and Appraisals.
216 W. Market St. Greensboro, N. C.

WANTED

CONTACT
WITH SPINNING MILL

by long and well established domestic and export distributor of top grade spun rayon, spun acetate and blend yarns. Can purchase share in mill or finance operation, if suitable arrangements can be made for handling all or share of production.

References and banking connections on request.

BO-686 Textile World
330 West 42nd St., New York 18, N. Y.

SOUTH AFRICA

J. EULE & COMPANY.
P. O. Box 9115, Johannesburg.

Excellent trade connections, seek sole representation from leading manufacturers and exporters of textiles of every description, woolen, cotton and rayon piece goods, underwear, furnishing materials, knitwear, fancy goods, hosiery, hardware, tap and electrical goods.

BANKERS: Barclays Bank (D.C. & O.), Joubert Street Branch Johannesburg.

SOUTH AFRICA

Agencies required by leading Wholesalers and Manufacturers Representatives, very well connected with Clothing and Dress Manufacturers and General Importers, seeks sole representation for textiles (woolen, cotton and rayon piece goods) textile machinery trimmings, Sewing Cotton and Sewing Silks, Linings, Waistbands, Button Moulds, Belting, Wadding Shoulder Pads, Electric Goods, and any other lines suitable for South Africa. Southern and Northern Rhodesia and the Belgium Congo as our Organization covers these territories. Write

Factory and Wholesale Supply Co.
P. O. Box 8169, Johannesburg

AUTOMOTIVE REPRESENTATION

Representation available to quality producer of suitable materials. I can place your business in substantial position in automotive field. Your inquiry invited.

RA-652, Textile World
520 North Michigan Ave., Chicago 11, Ill.

WANTED

To act as Austrian representative of progressive and forward looking American spinning mill or dye company. Am textile engineer with best connections all leading manufacturers.

Address:
WILHELM NEUMANN v. SPALLART
Text. Ing. Wien VIII. Langegasse 74.

ARGENTINA

Merchant in Argentina, well established in textile line with excellent commercial and banking references such Argentine representations of textile machines, for spinning mills of dressed (combed) wool, for spinning mills of carded wool and cotton, for knitting mills, for dye plants, also all kinds of spare parts for same and needles for knitting machines. Also interested in obtaining representation and exclusive distribution of combed mercerized and "gassed" cotton yarn, rayon and nylon yarn—Send bids and catalogs to:

CHASKIEL SZAPIRO
Buenos Aires Corrientes 5576

EXPORT TO SCANDINAVIA

New York buying office with large following and best personal connections with mills in Sweden, Norway, Denmark and Finland, own branch office in Sweden, already representing several well-known U. S. manufacturers, wishes additional representations of manufacturers of textile machinery and all kinds of yarns. Expert staff and best references.

RA662 Textile World,
330 West 42nd St., New York 18, N. Y.

Sales & Engineering or Manufacturer's Agent

A successful Sales and Engineering organization, contacting all Textile Mills, is interested in one or two new accounts in the New England and Middle Atlantic States.

RA-635, Textile World
330 West 42nd St., New York 18, N. Y.

Representation for Denmark

Textile Expert, with good connections throughout Scandinavia and first class references, seeks representations.

POUL FRAENKEL
Jacob Erlansensgade 5, Copenhagen, Denmark

WANTED

Automatic Looms

• For commission weaving on colored cotton fabric • steady yarn supply assured • reply confidential

CW-646, Textile World
330 West 42nd St., New York 18, N. Y.

SEARCHLIGHT SECTION

FOR SALE

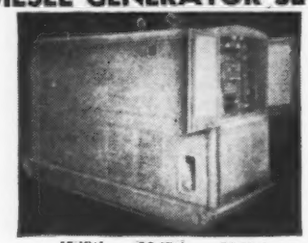
1—Sargent 36" Burr Picker with automatic feed
1—E. & H. 66" yard folding machine
2—Smith-Drum Skein Mercerizing Machines
1—Sargent 48" Rotary Feed with squeeze rolls
1—P&W Doubling & Folding & Measuring Machine, 66"
2—J. S. Windle Doubling & Folding Machines, 60"
2—Whitin 378 Quillers, 2½" gauge
1—Kettling & Braun Full Decating Machine, 60" wide
1—Gessner 66" "Jumbo" Press
1—Voelker 66" Press with extra cylinder & jackets
2—Spoolers, 12 & 24 Drums, 6" Drums
1—L. & G. Chenille Cutter
1—Set (7) Dry Cans, 90" wide
1—No. 60 Universal Roto Coner for 3/30 Cones, 6" traverse
1—84" D.A. Woonsocket Napper 20 rolls, Motor Drive
19 Plush Beams, 70" with 24" flanges, all steel

UNIVERSAL WINDERS

#50's and #90's, rebuilt to order.

FRANK W. WHEELER Co.
1837 East Ruan St., Phila., Pa.
Phones: Jefferson 4771-4772

PORTABLE DIESEL GENERATOR SETS



15 KW 30 KW 50 KW
INTERNATIONAL UD-14—UD-18
BRAND NEW—SPOT DELIVERY
RADIATOR COOLED—SKID MOUNTED
60 cycle 127/220 volts
50 cycle 230/400 volts
SPECIAL PURCHASE BARGAIN

ROBERT SCHOONMAKER
Port Washington, Long Island, N. Y.
Phone Roslyn 1600

DYE HOUSE

WANTED

TO PURCHASE, RENT OR LEASE OR PARTNERSHIP OR COMMISSION

Dyeing or Bleaching of Cotton Knit Piece Goods, Capacity 75,000 to 100,000 lbs. weekly

BO-693, Textile World, 330 West 42nd St., New York 18, N. Y.

WANTED

COMMISSION WARPING

On Rayon and Cotton Tubes and Cones,

ARROW ELASTIC COMPANY, INC.
48 Hampden Street Springfield, Mass.

DYESTUFFS

Will buy your surplus and obsolete dyes and chemicals for cash.

NEW ENGLAND PRODUCTS CO.
91 Oliver St. Boston, Mass.

WANTED

Surplus

Chemicals, Dyes, Gums, Oils, Waxes, Greases, Pigments, Residues, By-Products, Wastes

W-270, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED

YARNS—For Cash

All types—Cotton, Rayon, Acetate. Natural, Tinted or Dyed.

W-664, Textile World
330 West 42nd St., New York 18, N. Y.

FOLDING MACHINE

Curtis & Marble cotton yard folding machine, like new, located in New York City.

FS-688, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED

PUSSY-WILLOW CHENILLE

LARGE QUANTITY
REPEAT ORDERS

in greens, 8, 10, 16 figures per yard. Submit sample and prices.

W-692, Textile World
330 West 42nd St., New York 18, N. Y.

YARNS WANTED

Wanted to purchase surplus yarns of all types — cotton, rayon, acetate, nylon, silk, wool, spuns, and blends.

W-474, Textile World
330 West 42nd St., New York 18, N. Y.

FOR SALE
Wildman 34 Cut

SPRING NEEDLE MACHINES

12 inch	19 inch	23 inch
16 inch	20 inch	24 inch
17 inch	21 inch	26 inch
18 inch	22 inch	28 inch

FS-684, Textile World
330 West 42nd St., New York 18, N. Y.

Twin Atlas Compound Engines

Each 350 horsepower, high pressure 16x48 cylinders, low pressure 32x48 cylinders, made by Atlas Engine Works, Indianapolis, Indiana, with condenser. Connected to 20' fly wheel for rope drive. If interested inquire

FS-641, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED TO BUY

CARDS

2—60 x 60 or 72 x 60 Davis and Furber cards with tape condensers and auxiliary frames or mules.

Will pay top prices for equipment and if necessary will make yarn available immediately to seller. Write full details.

W-687 Textile World
330 West 42nd St., New York 18, N. Y.

Long Established Reputable Concern with Substantial Capital

WILL BUY FOR CASH

Assets, Capital Stock, Family Holdings of

INDUSTRIAL PLANTS, MFG. DIVISIONS, UNITS

Among other considerations, you may realize certain desirable tax advantages

We are principals and act only in strictest confidence, retaining personnel wherever possible. Address

Box 1222, 1474 Broadway, New York (18), N. Y.

Additional Wanted Advertising on Page 268

The COTTON GIN was invented 2246 years ago

THE ROLLER GIN was invented in India about 300 B.C. It worked well on sea island cotton, but would not handle the upland cotton of our Southern States, so the extent of cotton growing seemed limited. But in 1793 Eli Whitney of Massachusetts produced a machine that did work and revolutionized the cotton industry of the world. He was granted a patent in 1794. The power saw gin (an improvement on Whitney's machine) was the first real practical and productive gin in the world. It was made by Hogden Holmes of Augusta, Ga., and was run by water power in Fairfield County, South Carolina, by Mr. James Kincaid in 1795, and patented in 1796.

Illustration from the Bettman Archive

SERVING THE TEXTILE INDUSTRY

1—80" Batcher
#00 Sturtevant Blowers, paddle type, belt driven
1—62½" C&M Brushing Machine
3—2—46", 1—50" Button Breakers
1—48" Bridesburg Card Set, 2 Cyl. Wood
1—48" Furbush & Gage Card Set, 3 Cyl. Wood
1—60"x42" D&F Single Breaker Iron Card
8—Whitin Model C Combers
1—Whitin Model C Ribbon Lapper
1—Whitin Model C Silver Lapper
2—48" D&F Ceiling Condensers
1—64" Voelker Dewing Machine
1—100 Spindle, #25 Foster Doubler equipped for wooden Tubes, motor driven with 5 HP, 550V motor
3—48" P&W Doubling, Boarding and Winding Doublers
1—Set 20 H. W. Butterworth 108" dry cans, Dryer, motor driven, with Reeves drive
1—72" Schofield Automatic Duster, no apron, no fan
2—26" Tolhurst Extractors, belt driven, overhauled
1—30" American Laundry Extractor, copper tinned basket, belt driven, under drive
2—40" Cleveland and Tolhurst self-balancing copper basket Extractors, top pulley drive
6—10", 42", E&H and C&M Folding Machines, with take-up stand, chain drive, no motor
1—100" C&M flat fold Folding Machine, 1 HP GE Ind. motor
6—#7 Hunter 2-string Fulling Mills, belt driven
1—48"x21" Smith & Furbush Garnett with feed apron
1—49"x20" James Smith Garnett
15—40", 48", 54", 60", 70", 90" Card and Napper Grinders, with and without floor stands
2—Peerless Belt Lacing Machines
1—Card Lacing Singer Machine ½ HP GE Ind. Motor
2—45½ C&K 4x1 Looms, 25 harness with 1 HP D.C. motors
1—48" C&K 4x4 Box Loom, 25 harness, motor drive
32—45½" Reed Space Draper Mod. K and Hopedale Automatic Looms, 20 harness, belt drive
8—54" Reed Space C&K 2x1 Looms, 20 harness, belt drive
31—54" Reed Space C&K 4x1 Looms, 20 harness, belt drive
16—54" Reed Space C&K 4x1 Looms, 25 harness
12—54" Reed Space C&K 1x1 Looms, 20 harness
1—54" Reed Space C&K 1x1 Loom, 25 harness
4—82" McCloskey 3x3 Box Looms with 4x4 extra boxes, 12 harness, friction clutch belt driven
68—80" and 82" C&K 2x1 Automatic Looms, 8 harness cam motions, motor driven
6—92" C&K 4x1 Automatic Looms, 8 harness cam motions with 2600 hook jacquards, motor driven.
6—76" Draper Modified D Automatic Looms with lacey tops, belt driven, equipped with midget feelers, friction let-off, warp stop motions and 1½ beams per loom
2—Starch Mangles
1—42" C&M Measuring Machine, 60 yd.. dial, belt driven
1—54" P&W Measuring and Winding Machine with 100 yd. clock with motor
1—64" P&W Measuring and Woolen Cloth Winder
1—66"x24" P&W 60 yd. Measuring Machine, sanded roll, belt drive
2—24 Pole Smith Drum Skein Mercerizers
1—66" Woonsocket Double Napper, each cyl. with 20 rolls
1—80" D&F 20 Roll Single Acting Napper, belt driven
1—80" Woonsocket 24 Roll Double Acting Napper, belt driven
1—42" Olsham Fearnaught Picker with feed table, no feed
8—50", 65½", 66" and 98" Voelker and Gessner Single and Double Rotary Cloth Presses
3—50 Spindle Carpenter 54" Skein Reels, non-adjustable, belt driven
1—50 Spindle Carpenter 54" Adjustable Skein Reel, belt driven
3—50 Spindle Whitin Adjustable Skein Reels for 54" to 72" skeins, belt driven
1—60" C&M Spindle Blade Shear, plush, arranged for motor drive, no motor
12—66" P&W 2-Blade Shears, Model B, belt driven
2—66" P&W 2-Blade Shears, Model A, belt driven
2—60" P&W File Cut Single Shear
2—66½" P&W Single Blade Shears, belt driven
1—72" Monteforte 3-Blade Shear
4—76" C&M Single and Double Blade Shears
1—42" Singer with hood
1—32" D&F Jack Spooler
1—100 Spindle Draper Spooler with Foster Tension, McCall Guide
1—28" Wide x 12" Diameter Set of Iron Squeeze Rolls
1—30' Clip Tenter Frame with 36—76" Opening, brass gates, with Reeves drive and motor
1—40' Butterworth Pin Tenter Frame with 44—62" Opening with Reeves drive, arranged for motor, no motor
1—60" C&M Single Brush Tiger, arranged for motor drive, no motor
22—156 Spindle S&L Tape Driven Twisters, 3½" R, 5" gauge, belt driven
1—200 Spindle Lowell Trap Twister, 3½" 5 gauge, arranged for chain motor drive, no motor
1—Washing Tub Agitator with motor
2—54" Entwistle Warpers
1—Card Clothing Winch
1—80 Spindle Foster Tube Winder
1—46" Winding, Boarding and Tubing Machine
2—60" P&W Winders
2—Sargent Yarn Conditioning Machines
1—Reduction Gear
1—#15533 Reeves Drive, Size 6, Class G, Range 3 to 1

QUANTITY OF MULE BOBBINS AND VARIOUS SIZE TWISTER BOBBINS AND WOODEN SPOOLS

MACHINERY LIQUIDATING COMPANY

OPA REGISTRATION NUMBER 789

EST. 1923

31-33 West 42nd Street — NEW YORK 18, N. Y.

DOMESTIC — TELEPHONE PEnnsylvania 6-8014 — EXPORT

SPECIALISTS IN SELLING AND PURCHASING TEXTILE MACHINERY, ACCESSORIES AND MILL SUPPLIES

TODAY It's . . .

New fibres

New products

New standards—

—AND

to furnish used or rebuilt equipment

The "old Reliable"

McDOWELL ASSOCIATES !

That's an old story to experienced textile men who want value.

PARTIAL LIST

DYEING & FINISHING

2—BATCHERS—60" & 54" 1 and 2 roll.
3—BRUSHING Machines 54" to 100"
7—CALENDERS, 19" to 80"—2 roll to 6 roll units
2—CALENDERS, Embossing—54" & 60"
2—CAN DRYERS—21 cans copper 101" x 23" and 22 cans 105" x 23" with drives
2—VACUUM CLEANERS Mill type motor driven
1—BUTTON BREAKER—60", 19 rolls
1—GESSNER DECATUR 72" x 36" diameter, 1936 model
4—DOUBLERS & Measuring Machines 40" to 66"
3—DRY HEADS & 11 Aluminum Baskets Tubular Knit Goods
1—DRYER 2 section Drum type for Knit Goods
2—DRYERS Loop 84" units.
1—DYEING Machine Package 36 pkge unit
4—DYEING Machines 500 Lb. & 750 Lb.
5—DYEING Machines Skeins, stick & arm types
3—DYEING Kettles sample type with reels & lined boxes
1—ENGINE Corliss 286 Hp and 20 KW Westinghouse Lighting Generator
6—EXTRACTORS 24", 40" and 48" units
2—EXTRACTORS Vacuum 60" and 72" units
4—Folders Cloth 40" to 48"
3—Fulling Mills 2 and 4 string units.
20—HUMIDIFIERS Model G with 220/3/60 motors
4—INSPECTING Machines 50" to 96"
4—JIGGS 42" Stainless Steel Lined Boxes
1—KETTLE Wood Box & Reel 6'
5—KIERS 1200 to 3900 gallon capacities
4—MANGLES 30" to 66" 2 & 3 roll units
2—NAPPERS 80" Cotton 20 roll units
2—NAPPERS 80" & 90" Knit Goods 20 roll units
3—NAPPERS 66" to 80" Woolen 24 & 36 roll units
2—PADDERS 60" & 69" Units 2 roll machines
1—PALMER 60" with blanket
4—PRESSES, Rotary 66" to 80" Double & Single Bed Units
2—ROLLING & Measuring Machines 48" & 54"
1—V.V. SLASHER, Rayon, 3 cans, Foxboro Guides
6—SHEARS 45" to 80" Single & Double Blade Units
7—SHEARS 45" to 70" Four Blade Units
3—SHEARS Carpet 36" to 108" Units
1—SINGER 70" 4 burner unit
1—TENTER Frame, Clamp style 90" long x 48" wide
1—TENTER Frame, Clamp style 24' long x 60" wide
2—TIGERS 66"—3 & 4 cylinder units
3—WASHERS Wool type 72" & 80" inside box
4—BACKWASHERS 2 bowl units for Tops.

near 138th Street

This page gives a partial listing only

CARDING, SPINNING & WEAVING

1—BREAST 80" complete
1—BALING Press 5' x 3' x 6' motor driven
4—RUBB Condensers with Doffers & Rings, 48" & 60"
1—TAPE Condenser 48" taking off 72 ends (New)
1—CARD Single cylinder 45" x 48" with condenser
10—COMBERS 10" coilers 4 heads per unit
1—Conditioning Steam Box for Bobbins or Tubes
3—CUTTERS for Flock reversible
1—CUTTER for Rags
3—DOUBLERS Foster #25 100 spindle units
3—DOUBLERS Universal #160—80 spindle units.
6—DRAWING Frames, 6 deliveries each, 12" Coilers, metallic rolls
2—DRESSING Reels 92" and 110" widths
3—FEEDS Automatic Hopper for 60" Cards
1—Feed Automatic Hopper for 60" Picker
4—Gill Boxes Baller type Single Head, double delivery
6—INTERMEDIATES 9 x 4½—84 and 114 spindle units
5—JACKSPOOLERS 35½"—40 ends and 48" —60 end units
60—DRAPER E Looms, 30", belt drive
150—DRAPER E Looms, 50", belt drive
225—DRAPER E Looms, 40", belt drive
12—STAFFORD Looms, 60" motor driven
1—FLETCHER Narrow Loom 6 space unit widths ⅛" to 1⅛"
6—C&K CARPET Looms, 12/4 stationary wire jacquard attachments
18—C&K LOOMS, 82"—4 x 1, 25 harness heads with motors
14—C&K LOOMS, 82"—4 x 4, Box, belt drive
11—C&K LOOMS, 92" 4 x 1, automatic, 12 harness dobby arranged for motor drive. (no motors)
38—C&K LOOMS, 92" 4 x 1, automatic, 4 harness, arranged for motor drive. (No Motors)
6—C&K LOOMS 92" 4 x 1 automatic, jacquard 2600 hook, motor driven
2—MULES—360 spindles each, 2" gauge
3—MULES—390 spindles each, 2¼" gauge
6—MULES—650 spindles each, Worsted
1—MULE—288 spindles, 2¼" gauge, adjustable brackets
1—OILER for 48" Picker with pump
2—VERTICAL Openers with Hoppers and condensers
1—DODGE Picker—20" face, 28" diameter with feed rolls and table
5—QUILLERS Whitin 378 spindles each, 2½" gauge
4—REELS Skein 54"
2—REELS, Skein 72"
3—SPEEDERS Whitin 7 x 3½, 176 spindles each
6—SPEEDERS 8 x 4, 144 spindles each
19—SPINNERS, 100 spindles each, 6" traverse, motor driven
8—SPINNING Frames H & B, Cotton 252 spindles each, 2" ring, 3" gauge band driven
10—CARD Strippers used on 40" Cards
1—TWISTER Prince Smith Universal type, 200 spindles, 2½" ring, 3½" pitch, doffy rolls
1—TWISTER Brownell Model M, 96 spindles, 6" gauge
2—WARP Dressing Reels, 92" & 110"
2—WARPERS Ball with stop motions, measuring devices etc.
1—WINDER, Foster, 40 spindle, skein to tube
3—WINDERS Oswald-Lever bottle type, waxers & skein attachments 24 spindle units
7—WINDERS Foster #30 wooden cones 108 spindles each, slub catchers & tension device
1—WINDER Foster #12 paper cones, 100 spindle unit

Miscellaneous parts: Harness Frames, Shuttles etc., for 82" and 92" Woolen Looms, also rolls, card clothing, etc.

McDOWELL ASSOCIATES, Inc.

2568 Park Avenue — Bronx 51, New York

Tel.: MElrose 5-1772

America NEEDS your un-needed machinery!

"CONSOLIDATED"

Needs your list to meet the calls of American Industry

Action! Turn your Idle Equipment into Cash.

...We Buy (And Sell) A Single Item Or A Complete Plant

NEED EQUIPMENT? CHECK LIST BELOW—THEN CALL OR WIRE

EXTRACTORS

4—K & G & Burkhardt 60" Extractors, rubber baskets
1—Hercules 48" Extractor, copper basket.
3—26" & 30" Hercules Extractors.
1—V.V. 42" self Balancing Extractor with motor.
2—Gessner 72" & 50" Vacuum Extractors.

DYEING MACHINES

3—V.V. stainless steel lined dye becks, complete with motors and drives.
2—Smith-Drum 22 & 20 arm skein dyers.
3—K & W, Obermaier & Buhlmann skein dyers.
1—Sargent 3-bowl scouring train, 48" bowls.
3—Yarn scouring & dyeing machines, all stainless steel.

DRYERS

1'P & S Raw Stock Dryer, automatic feed.
1'P & S 4-unit 8' Multipass Airlay Dryer.
1—National Loop Dryer, 6 fans, 86" wide.
1—Heathcote Pin Tenter Dryer.
2—P & S Hurricane Dryers.
2—3-Apron Conveyor Dryers
1—Hurricane Wool Dryer.
1—Hunter High Speed Rotary Tenter Dryer.

NAPPERS

2—D & F Single Acting Nappers, 60" & 84".
3—Gessner & Woonstocket S. A. Nappers, 84"-90".
2—Woonsocket 86" 20-roll S.A.B.B. Nappers.
1—Woonsocket 86" 24-roll D.A.B.B. Nappers.

TENTER FRAMES

2—Textile Fin. & Butterworth Tenters, top opening, clips, 60' & 90'
1—Heathcote Pin Tenters 30'-60" wd.
1—V.V. 40' Tenter, 60", S.S. clips.

PALMERS-PALMER QUETCH UNITS

1—Textile 66" Low type Palmer.
1—V.V. 88" Palmer Quetch Unit.

PADDERS - MANGLES - QUETCHES

1'V.V. 60" 2-roll Dye Padder, rubber rolls.
2—2-roll Padders, 94" & 98".
2—Butterworth 50" Starch Mangles
3—Butterworth & Morrison 2 & 3-roll Quetches 50"-72".

BEAMERS - BATCHERS

5—Textile 50", 60", 66" & 72".
4—2-Roll B.B. Batchers, 50"-72".

FLAT FOLDERS—DOUBLERS

2—E & H Flat Folders, 50"-60", with motors.
3—P & W & Windle Doublers, 50"-65".
1—96" Doubler & Folding machine.

COATING MACHINES

3—Plastic & Rubber Coaters, 50"-72".

DECATERS

1—P & W 72" Full Decater.
1—P & W 50" Semi-Decater.

WASHERS

2—Riggs & Lombard Continuous Cloth Washers.
3—Empire Washers.
1—American Laundry Cascade Washer.

BRUSHING MACHINES

2—74" Rotary Cloth Brushers
2—Double Wool Brushes, 84" wide.

CALENDERS

2—Butt. 2-roll Hydraulic Calenders, 30 & 100 tons.
1—Butt. 3-roll Embosser, 72".
1—Grand Rapids Calender, 46½".
1—Butt. 3-roll 55" Calender.
1—Textile Fin. Co. 150" 2-roll Calender.
1—Textile Fin. 2-roll 60" Calender.
1—C. & M. 2-roll 60" Calender.

SHEARS

3— P & W 2 Blade Shears 66½"
1—P & W Single Blade Shear 60".

1—Flock Stencil Print Machine, complete.

15—New S.S. Cans, 66", complete with motor & drive.

1—V.V. 40' Tenter, 60", S.S. clips.

1—National 6-Fan Loop Dryer, 86".

DYE BECKS—DYE JIGGS

3—V.V. 4' stainless steel lined dye becks, complete with motors and drives. New all S.S. Dye Becks, 4'20' long.
4—60" S.S. Dye Jiggs.

PRINT MACHINES

2—R.B. & F. 3-color Print machines, 40".
2—R.B. & F 5 & 7 color Print machines, 40".
1—Single Color Print Machine, 60".
1—Werner 54" Single Color Print Machine.

TUBERS & MEASURING MACHINES

3—Tubing & Measuring Machines, 50"-60".

"AMERICA'S BEST BUYERS" WANT YOUR IDLE EQUIPMENT

SINGLE ITEMS TO COMPLETE PLANTS

SEND YOUR LIST NOW

WEAVING MACHINES

14—C & K 72" looms.
20—C & K heavy duck Looms, 76".
14—Halton Fine Index D. L. Jacquards.
30—C & K 2 x 1 looms, 68".
4—Stafford 4 x 1 89" Looms.
1—Light Cord Tire Fabric Loom, 72".

KNITTING MACHINES

Lot of Hosiery Knitting Machines.
Lot of Outerwear Knitting Machines.
Lot of Wildman, S & W, S & H & Leighton machines.
5—Latch Needle machines, 20", 30" & 35" cylinders.
4—Dubied & C & F machines.
Lot of Copper Spring Needle machines.

PREPARATORY MACHINES

1—40" Fearnaught Picker.
1—Woonsocket Single Beater Breaker Picker.
4—Shoddy or Rag Pickers.
1—Whitin 40" Finisher Picker.

CARDING MACHINES

1—D & F 2-cylinder 48" x 60" Card with Bramwell Feed.
2—Sets 3-cyl. D & F 48" x 48" All Iron Cards.
1—D & F 60" Card Breaker.
2—Kitson & Bates automatic Hopper Feeders.
1—Bramwell 72" Feed.

SPINNING & WINDING MACHINES

11—Davis & Furber Mules 2¼" gauge.
40—Whitin Spinners, 204 spindles, 4" gauge.
1—Davis & Furber Compressor Spooler.
12—#90 Universal Winders, for silk operations.
1—Sipp 80 spindle Winder.
4—Eastwood Skein Winders, 44" to 60" skeins
4—Payne & Huse Winders.
3—Sipp Eastwood Skein to spool Winders, 100-200 sp.

BUTTON BREAKERS

2—V.V. 60" & 50" Button Breakers.

BRAIDING MACHINE

—Lot of New England Butt Braiders.

TWISTERS

5—Brownell Twisters, 48 to 96 spindles.
9—Whitin Twisters, 200 spindles, tape drive.
1—D & F 60 spindle Twister, 3¾" gau.
30—F & J Twisters, tape driven, 4½" ring.

THE KEY TO SAVING TIME AND MONEY

FOR OVER A QUARTER CENTURY SYMBOL OF CONFIDENCE

CONSOLIDATED PRODUCTS COMPANY, INC.

Address All Textile Inquiries to

TEXTILE DIVISION, PATERSON 2, N.J.

33-41 BERGEN ST. Tel. ARmory 4-6540

15 PARK ROW • NEW YORK CITY 7 • N. Y.

AGER, wood, acid
AGER, Stainless steel Acid
AGER, Tower, New
BEAMER, 60" Van Vlaanderen
BEAMER, 60" with Steaming drum
BUTTON BREAKER, VV 50" & 70"
BELT, Leather, 3 ply, 28"x½"x70" long
CALENDAR, 4 roll 50" Hydraulic
CALENDAR, 3 roll 44" lever pressure
CALENDAR, 3 roll, 20" Morrison
CALENDER, 3 roll, 70" face
DECATER, GESSNER, Full, 72"
DRYER, P. & S. Airlay
DRYER, Single & Double Truck
DRYERS, Kenyon & Heathcote, 6 tier
DYE BECKS, stainless steel 4' to 20' New
DYE TUBS, 6' wood, complete motorized.
DYEING MACHINES, Smith Drum Paddle type
DYEING MACHINE, Smith Drum Pocket type
DYEING MACHINE, Smith Drum 60 arm
DYEING MACHINE, Rochester rotary 30"x20", 3 pocket, 20 lb. capacity
EXTRACTORS, Beam 50" & 60" BB
EXTRACTORS, Open Top Tolhurst 40"
EXTRACTOR, VV Copper basket 48"
EXTRACTOR, open top 30" American
FANS, exhaust 3 blade propeller 30", 36"-48"
FLOCK STENCIL MACHINES, with patterns
FLAT FOLDERS, Elliott & Hall adjustable
INFRA RED units complete with blowers
INSPECTOR TABLES, with DC motors, 47"
JIGGS, monel lined 60", st.st. 50" & 60"
LOOMS, C & K, 2x1 46"
MEASURING MACHINE, P & W Model AWC
MOTORS, over 300 GE ¾ to 5 HP 220 volt
OVEN, equipped with Maxon heaters
PAD, 8 roll Hydraulic
PALMER 62"
PALMER QUETCH, 54" Butterworth
PALMERETTE, 60" face, General Machine
PLEATER, K & G
PRINT MACHINE, 10" sample or Ribbon
QUETCH, 2 roll VV 50" & 60" ball bearing
SCUTCHER, 50" AMW
SCOURING MACHINE, 3 bowl
SEWING MACHINES, Arlington, Bicycle
SHEAR, Hermas, 4 knife 70" wide
SQUEEZE ROLLS, 12" x 10"
STEAMER, Cottage, 12' long x 66" wide.
TENTER FRAME, W&J 90'x51" wide
TENTER FRAME, VV 55'x60" wide
TENTER FRAME; VV 40'x60" wide
TENTER FRAME, PIN, W. & J. 30'x220" wide
TIGERS, Dry P. & W. & C. & M.
TUBER, with examining board 80"
TUBERS, Paterson variable speed motors
TUBER, VV with doubling attachment
WARP COMPRESSOR CREEL
WASHER, open 4 compartment, 60" wide
WASHERS, Slop, New, stainless steel
WASHER, GL Rope type steel & wood
WASHER, 3 compartment open
WOOL WASHERS, J. Hunter 6 and 8 ft.
WATER SOFTENERS & FILTERS

We are prepared to help you in disposing of or acquiring both complete plants and individual machines. Your inquiries cordially invited.

CADGENE MACHINERY CO.
5th Ave. & McLean Blvd.
P. O. Box 1206 Paterson 4, N. J.
Sherwood 2-6577

BRAIDERS

175—Wardwell 16 carrier high speed braiders

40—Triple decker textile make wire braiders

3—7 strander twisters

Various other equipment

TWINE MACHINERY

9—Haskell & Dawes 2 Spindle 8" x 10" Formers
2—32 spindle Fairbairn Twine Polishing Machines
1—Silver & Gay 6 Spindle 8" Pitch Balling Machine
3—North Chesterton Machine Co. Ball Winders 12 Spindle each

ROBERT SOLOMON & CO., INC.
Dealers in Textile Equipment
30 W. Houston St. New York, N. Y.

FOR SALE

1—Butterworth 7 roll 80" Hydraulic Calender
1—Granger 3 roll 45" Friction Calender
1—Curtis & Marble 66" Disc Type Dampener
8—Tinned Iron Dry Cans, Vertical, 23"x44" face
21—Copper Dry Cans, Vertical, 23"x101" face
38—Copper Dry Cans, Horizontal, 23"x47" face
1—Hunter Raw Stock Dryer, age 1941
1—Heathcote Tenter Dryer, 72" cloth
2—Cast Iron Dye Jigs, 50" rolls
5—Thies Package Dyers, 50 lb., 200 lb., 500 lb.
1—Textile Pin Tenter, 64' long x 81" wide
1—Butterworth Pin Tenter 38' long x 66" wide
1—Arlington 4 bowl 66" Crabb
1—Parks & Woolson 98" Lancashire Winder
10—Crompton & Knowles 82" 4x4 box looms
200—Draper Model "E" 40" Cloth Looms

JAMES E. FITZGERALD
Textile Machinery
10 Purchase Street Fall River, Mass.
Tel. 8-5616

CLOTH DRYER

Heathcote tenter dryer, adjustable from 48" to 72" in width. Equipped with adjustable finger guides, excellent pin plates. Capacity 120 yards. For further information, write

FS-691, Textile World
330 West 42nd St., New York 18, N. Y.

FOR SALE:
Dubied and C & F hand machines
14 and 16" BEDS.
Write to
FS-566, Textile World
330 West 42nd St., New York 18, N. Y.

FOR SALE
STAPLE FIBRE CUTTER
for Mohair, Alpaca, Wool, Thread-waste, etc.
PAUL M. BROOMFIELD
Used & Rebuilt Textile Machinery
15 Hathaway St. Boston 10, Mass.
(Long. 3980)

FOR SALE

Six Hopedale Twisters:

80 Spindles each, band drive 5-½" gauge, 4-½" ring, 6-½" Traverse, 7" Cylinder, 2-5/8" whorl. Creels for 5 ply.

Two Hopedale Twisters:

100" Spindles each, band drive, 4" gauge, 3" ring, 5-½" traverse, 8" cylinder, 1-5/8" whorl. Creels for 4 ply.

FILLING WINDERS:

3 Lazenby Cop Winders, 10 spindles each. Size of cop 1-9/16" diameter, 10" long.

TEN LOWELL SPINNING FRAMES

as follows:

Six—204 Spindles each
Two—216 " "
Two—192 " "

All Band Drive, 3" gauge, 2-¼" ring, 7" traverse, 10" cylinder, 7/8" whorl. Double Birkenhead Creels.

Four Wooden Tanks:

9' 4" long inside
4' 0" wide "
3' 1" high "
All 2" stock

TWO RUBBER COVERED ROLLS:

18" diameter, 10' long.

ONE COPPER ROLL

as follows:

17" diameter, 9'6" long, Shaft—3" diameter by 4" long on each end.

One Set of 105" VERTICAL DRY CANS:

40 cans to the set, complete and including Swing Folder.

Two Windsor & Jerald 40' TENTER FRAMES

One Proctor & Schwartz, 3 unit, 8 foot automatic loop dryer.

Electric Motors:

as follows:

One 40 H.P., 440 Volts
Two 5 H.P., 220 Volts
Two 20 H.P., 440 Volts
Two 2 H.P., 220 Volts
One 10 H.P., 440 Volts
One 2 H.P., 230 Volts

C. R. DANIELS, Inc.
DANIELS, MARYLAND

---

2 NET DRYERS (Motor Driven)
3 QUETCHES (Motor Driven)
2 BEAMERS (Motor Driven)
2 MEAS. & TUBING (Motor Driven)

A. & M. BLANK CO., INC.
49 STATE ST. PATERSON, N. J.
Sherwood 2-1367 Lambert 3-9523

KNITTING MACHINERY

For Full Fashioned & Seamless Hosiery
Underwear & Outerwear Mills

A complete line of
Dyeing & Finishing Equipment.

Write for Catalog TW

MORRIS SPEIZMAN CO., Inc.
508 West 5th St. Charlotte 1, N. C. Phone 3-1894

EXCELLENT TEXTILE EQUIPMENT

RAYON FINISHING EQUIPMENT

1—Butterworth 50" stainless steel dye jigg, with motor.

2—Van Vlaanderen 54" dye jiggs, stone-lined, motor driven.

1—Palmer finishing machine, 66" staybolted cylinder, 52" Dia.

1—Van Vlaanderen 54", 2 roll Quetch, Ball Bearing.

1—Gessner 70" Semi-Decator, 30" Dia. cylinder, complete with blanket and vacuum pump.

1—56" Examining & Measuring machine.

1—3 roll 52" Cavagnero Finishing Calendar.

1—Butterworth 90' Tenter Frame, 50" width, with 15 H.P. motor, with steam coils, and top opening brass clips.

2—Elliot & Hall 52" Flat Folders.

WORSTED SPINNING EQUIPMENT

7—Prince - Smith cap spinning frames, 136 spindles each.

6—Prince - Smith cap spinning frames, 144 spindles each.

WOOLEN FINISHING EQUIPMENT

4—80" double teasel Gigs, with 7½ H.P. motor.

2—80" steaming machines, equipped with pleating device.

COTTON EQUIPMENT

3—Foster #30 winders, each with 100 spindles.

COMPLETE NARROW FABRICS PLANT

3—Fletcher Type Looms
1—Sample Loom
1—Warper
3—Quillers

All Auxiliary Equipment

PLANT NOW IN OPERATION

Autoclave, Beamers, Blocks Button Breakers, Calendars, Dry Cans, Hoey Chain, Dryers, Can, Loop, Conveyor, Gigs, Kettles, Pebble Mills, Enamels, Pans, Pantograph Engraving, Pumps, D.C. Motors, Padding Machine, Quetch, Pebbles, Rolls, Tanks, Water Softeners, Water Filters.

REMEMBER
Republic Textile
EQUIPMENT COMPANY
40 WORTH STREET NEW YORK CITY
Purchase and Sale of Used Machinery
REFINANCING • APPRAISALS • PURCHASE • SALE • LIQUIDATION OF MILL PROPERTIES

SEARCHLIGHT SECTION

FOR SALE

ITEM 6603
FLOCK GRINDER
Curtis & Marble #99591-432—Takes 20 H.P. Motor —No Motor Included

ITEMS 9710 & 9944
BEAMING FRAME
Standard Size—80" Between Heads—30" Maximum Dia.

ITEM 10056
TACKING MACHINE
Made by Din & Moore Mfg. Co.—Will Take Cloth Up To 90"—Complete With Folder & Sewing Machine & Motor

ITEM 6823
TWO ROLL MANGE
60" Wide—Rolls 12" Dia.—Equip. Roller Bearings

ITEM 12155
MEASURING MACHINE
Parks & Woolson—Serial #6194—Face of Drum 66"

ITEM 9945
WOODEN CREEL
85½" High—108" Long—7" Spindle—Centers for 220 Ends—3¼" Spindle—Centers for 440 Ends—Takes Paper Tubes

ITEM 9755
DEWING MACHINE
72"

ITEM 9866
BOIL OUT MACHINE
Includes Pumps & Foxboro Temp. Clock—Also Roll Up Machine—72"

ITEM H 1000
BACK WASHER DRYER
Taylor-Wadsworth—12 Cylinder

ITEM J.B. 123
2 WORSTED 48" LESTER-NIP COMBS
Ramsden & Stephenson—For Fine Wool—With Feed Boxes of 26 Fallers per Set

ITEM 6730
DOUBLING & MEASURING MACHINE
Parks & Woolson—#5599—Width 66"

ITEM 9841
WHITEN TAPE CONDENSER—NEW—COTTON
Model "C"—Serial 425000—Series—40" Width

ITEM 12149
STRAIGHT TYPE CREEL—NEW
McBride—300 Ends—Suitable for 4" x 8" Roving Bobbins—Equipped with Brake & Elec. Drop Motion

ITEM 6566
3 COLOR MATCHING LAMPS
MacBeth—Style BX53—3 Lights each—Lenses 11" Dia.

ITEM 9338
1 SINGLE DRUM JACK SPOOLER—48 END
Or Compressor made by Worcester—Warp Compressing Machine Co.—48" wide with Jack Spool Stand—5 digit Veeder Root yardage counter—new lot of Jack Spools with 12" Heads

ITEM 10189
75000—7 x 3½
COTTON SPEEDER BOBBINS

ITEM 10190 R
1—3 CYLINDER C. & A. TIGER
All Belt Drive from 5 H.P. Motor—66" Wide

ITEM L.H. 789
VOELKER STEAM PRESS
66" Wide

ITEM 6781
GESSNER STEAM PRESS
Jumbo Type—66" Wide

Collins & Aikman Corp.
Sales & Salvage Division
6th & Upland Aves.,
Upland, Delaware Co., Pa.
Phone — Chester 4167

FOR SALE

COMPLETE OBERMIER PACKAGE DYE UNIT WITH DRYERS AND WINDERS FOR TUBES AND CONES. ALL MACHINES MOTOR DRIVEN 220 VOLTS.

LIST OF EQUIPMENT AND PRODUCTION CAPACITY, ON REQUEST.

2—220 spindle F&J Twisters, 3" ga. 2" rings tape drive.

1—Smith Drum 3 Arm (monel) Dye Machine with Centrifugal Pump and Motors 220 volts.

BAY STATE TEXTILE CO.
220 HARTWELL STREET • FALL RIVER, MASS.

FOR SALE

8—H & B Tape Drive Wet Twisters; 1930 Model; 2¾" gauge; 1¾" ring; 8" cylinders; 8" traverse two ply all steel creels; single bottom and top rolls; now using a 4 x 5 spool; equipped with 10 HP Robbins & Meyers motors; 550 volt; 3 phase; 1750 RPM. 6 frames are 352 spindles each. 2 frames are 280 spindles each.
10—Barber Colman High Speed Warpers and Creels—432 ends per creel—450 yards per minute.
1—Barber Colman Spooler—120 spindles.
1—Barber Colman Spooler—100 spindles.
1—Hermas Four Blade Shearing Machine for 45" Cloth.
3—Saco Lowell Vertical Openers—equipped with gallows drive.
4—H & B 8 x 4 Speeders—144 spindles each.
2—Whitin Spirawhirl Cleaners.
2—1917 Model 10 x 5 H & B Slubbers; 116 spindles each.
40—Motor Driven Stafford Looms 100".
2—Saco Lowell Tape Drive Spoolers; 140 spindles each; motor driven.
15,000—4 x 5½ Lestershire Spools.

SAM SCHWARTZ MACHINERY CORPORATION
CHARLOTTE, N. C.
P. O. Box 1461 Telephones 3-7764-3-7765

TEXTILE AUXILIARIES

FOR IMMEDIATE DELIVERY FROM OUR OWN STOCK

2—100 HP Motors 400, 440 V. 2 Ph. 600 RPM.
1—75 HP 440 Volts 2 Phase—650 RPM.
1—50" Sprinkler
1—40" Tuber
6—50" Jigs Wood Tubs—Lined
2—50" Jigs All Stainless Steel
2—36" Hydro-Extractors
1—Prosp. Steam Press
1—250 HP Harris-Corliss Steam Engine
1—43' E&H. Folder
1—28" Drill Press
2—McClusky Tool Systems
2—COLBURN DRILLS—D4 and D8
1—BRASS PRESSURE TANK
4—40" Pads
1—50" Van Vlanderen Buttonbreaker
1—3 roll Hydr. Calender 36' wide
2—8 Cylinder Garnetts
2—Lead-lined Tanks 71" wide 44' deep
1—60' Extractor Copper Basket Tin lined
1—70' Semi Decator

TEL. DEXTER 9650 15 ORMSBEE AVE.
PROVIDENCE, R. I.

HARRY STEPHENSON
IMPORTER, DEALER AND MANUFACTURER
TEXTILE MACHINERY AND APPLIANCES
New and Used
River Works, Andover, Mass.

LOUIS J. WELSH Pres. & Treas.
JOHN J. McCLOSKEY, Inc.
ROBERT H. WELSH V. Pres. & Gen. Mgr.
MANUFACTURERS AND DEALERS
TEXTILE MACHINERY OF ALL TYPES
APPRAISALS WOOLEN—WORSTED—COTTON LIQUIDATIONS
NEW AND USED
Office Factory Warehouse: Collingswood, N. J.

GAINES TEXTILE MACHINERY CO.
Dealers in Rebuilt and Guaranteed
Yarn Winding and Spinning Machinery
141-45 West 17th Street New York 11, N. Y.

HOSIERY MACHINES
KNITTERS - RIBBERS - LOOPERS
CYLINDERS - DIALS - TRANSFERS
RIBBER CYLINDERS & DIALS
UNION SPECIAL SEAMERS
NEEDLES FOR EXPORT
C. M. FRENCH
Commercial Trust Bldg. Philadelphia 2, Pa.

FOR SALE
BUTTERWORTH CALENDAR
7 ROLLS—80" FACE
3 Composition Rolls, 4 Steel Rolls, Hydraulic lift —water-cooled journals. Located in South.
AMES BAG CO.
10 EAST 40TH ST. NEW YORK CITY

WE OWN AND OFFER FOR SALE

132—Draper Automatic Looms for 60" goods, equipped with Roper let-off and ratchet take-ups.

52—Draper automatic Looms for 48" goods, Roper let-off, worm take-up.

40—Draper automatic looms for 46" goods, Roper let-off, worm take-up, motor driven but no motors.

250—Draper automatic looms for 40" goods, Roper let-off and ratchet take-up.

80—Crompton & Knowles Automatic looms 4 x 1 with 20 harness dobbies to weave 40" goods.

34—Fletcher double deck spinners, 64 spindles each deck or 128 spindles to the machine. Each deck individually motor driven by a 3 HP motor. 7" center to center spacing. 5" Cork covered take-up rollers

8—Ribbon looms with dobbies. 15' 6" with double set of battens, one set for making Boucle fringe, the other set of battens for regular ribbon work.

10—Crompton & Knowles 4 x 4 48" Jacquard looms.

20—Crompton & Knowles 2 x 2 48" Jacquard looms.

70—Crompton & Knowles 600 hook double lift Jacquard machines.

100—#90 Universal quillers or coppers, with or without bunch builders belt driven or motor driven.
Sipp or Atwood winders to wind from skein to spool.
Sipp or Eastwood warpers and creels.

10—Atwood 5Bs Doubler twisters.

20—C and K Worcester 68" 2x1 Looms for silk or rayon roller bearing, shock absorber, motor drive, intermediate head.

6—Looms same as above 4x1.

21—Crompton and Knowles Worcester Looms 72" 4x1 Roller bearing shock absorber, intermediate head, motor drive.

19—C and K Worcester 72" - 4x4 Roller bearing shock absorber, intermediate head, motor drive.

68—C and K motor driven looms 4x1, equipped with dobbies, warp stop motion, pick clocks, temples, beams, etc.

74—2x1 same as above all for 48" cloth.

PATERSON
SILK MACHINERY EXCHANGE

24 Spruce St., Paterson, N. J. **Sherwood 2-1363-4-5-6**

FOR SALE

1—60" All Iron Proctor & Schwartz Single Breaker Card
1—60" All Iron Proctor & Schwartz Single Breaker Card with Feeder and Camel Back Lapper Winding Head, Cut Off and Folder, etc.
3—60" D.&F. Metallic Card Breasts
1—72" Sargent heavy duty feeder.
1—48" Curtis & Marble picker feeder.
2—48" Bramwell self card feeders.
1—48" Hardwood Picker Feed
1—40" Whitin Picker Feed
1—30" Sargent Picker Feed
1—Hunter Square Box Willow
1—Scofield Square Box Willow
1—S & F Square Box Willow
2—10' Proctor & Schwartz Cone Willows
1—10' American Cone Willow With Trunk Condenser and Blower
1—7' Davis & Furber Cone Willow
1—40" Proctor & Schwartz Shredder
1—30" Franke Cotton Picker
1—32" Curtis & Marble Burr Picker with Feeder
2—Scofield Shoddy Pickers
1—43" Scofield Carding Picker
1—36" Scofield Lumper Picker
1—36" Proctor & Schwartz Mixing Picker
1—30" D & F Mixing Picker
2—Hunter Variable Speeds
1—Reeves Variable Speed No. 94508
1—Smith 30" x 60" garnett machine.
4—40" Harwood card feeders.

H. B. LINCOLN, JR.
P. O. Box #11 Swarthmore, Pa.

WANTED

DUBIED, SEIFERT & DONNER and GROSSER widening machines

6, 7 and 8 gauge. *Write to*
W-663, Textile World
330 West 42nd St., New York 18, New York

WANTED

2—2 Spindle Gill Boxes 14 x 9
2—14 x 9—Drawing Frames (For Weigh Box)
2—14 x 8—Finishers 6-8 Spindle Boxes
4—8 x 4 Roving Frames

Will Buy Part of Above Machinery or All
Willing to pay Good Prices

Talny Spinning Co.
1398 Adams Av., Philadelphia 24,Pa.

WANTED

BALING PRESS

Floor scale, portable stacker.

UTICA WADDING CO., INC.
605 East 132 St., Bronx, N. Y.

WANTED

12—Lindsay Hyde 72"
SKEIN REELS

Address
W-703, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED

35 GARFIELD UNITENSE LOOM LETOFFS.

W-651, Textile World
330 West 42nd St., New York 18, N. Y.

WANTED

CAMEL BACK LAPPERS

Producing 60" width bats.

ADDRESS
W-700, Textile World
520 North Michigan Ave., Chicago 11, Ill.

WANTED

12 PLUSH LOOMS

W-694, Textile World
330 West 42nd St., New York 18, N. Y.

Memo:

To: Executives of Dyeing, Finishing and Bleaching Plants

As the country's largest dealers catering exclusively to the dyeing and finishing industry—we are in a unique position to offer highest possible prices on single items or complete units which you may have for sale.

A note to us, at the address below, or a phone call, will bring an authorized representative to your plant promptly.

ADVANCE MACHINERY CO., INC.

Textile Dyeing, Finishing and Printing Machinery

179-197 EAST 7TH STREET PATERSON 4, N. J.

Telephone ARmory 4-7068, 4-7069

WANTED

- **JACQUARD FINE INDEX REPEATER**
- **JACQUARD FINE INDEX CARD CUTTER**
- **JACQUARD FINE INDEX HAND REPEATER**
- **JACQUARD FINE INDEX LACING MACHINE**

Address

W-649, Textile World
330 West 42nd St., New York 18, N. Y.

WE WANT TO *BUY* ANY TYPE—ANY QUANTITY

Singer, Union Special, Merrow, Overlock Sewing Machines. We need them desperately. We will pay

SKY HIGH PRICES!

WRITE — WIRE — PHONE

HEIMLICH BROS., Inc. 136 W. 25th St. N. Y. 1, N. Y.

WATKINS — 9-4415

(Additional Wanted Ads on page 260)

ANOTHER "A-B-C" TO REMEMBER

WITH A BOW TO CHESTERFIELD'S

ALWAYS BUY CRESCENT!

AND THIS IS *the* WHY *of* CRESCENT *Leadership*

Crescent Leadership in the Textile Field has been established by EXPERIENCE and by SPECIALIZED SERVICE.

You deal with SPECIALISTS in Textile Machinery when you BUY from CRESCENT . . . such specialization insures your getting WORTHWHILE equipment every time.

You deal with SPECIALISTS when you SELL TO CRESCENT — such specialization brings us INQUIRIES for textile machinery from all over the field. This same specialization applies to our Liquidation and Appraisal Services . . . you get best results from SPECIALISTS in ANY field!

Crescent contacts are broad. Our prestige is well established. That simply means YOU get MORE for your money, and SAVE more TIME and MONEY, when you deal with Crescent—whether it is a matter of a single item or a complete plant.

ALWAYS BUY CRESCENT

LIQUIDATIONS • APPRAISALS • PURCHASE • SALES

OPENING & PICKING

1—Saco Lowell Bale Breaker, 1922
2—Lummus 3 Delivery Gyrators
1—Whitin Intermediate Picker
2—Kitson Finisher Pickers, 40", 1910 Model
4—H. & B Finisher Pickers
8—Vertical Openers, Woonsocket, Saco-Lowell, H. & B
1—Kitson 42" Down Stroke Cleaner

WASTE MACHINES

1—Whitin Model "A" 3 cylinder hard Waste Machine, 1927 Model, lattice apron, 3 pin cylinders, 3 screen condensers.
1—Potter & Atherton Machine Co. Willow

CARDS

1—Dobson & Barlow 45" Waste Card, Flat Top, equipped with Breast, 12" coiler.

DRAWINGS

132 Deliveries H & B Drawing, 12" coilers

ROVING

3—Woonsocket, 12 x 6 Slubbers
6—Woonsocket, 11 x 5½ Slubbers
3—H & B, 11 x 5½ Slubbers
2—Saco-Pettee, 10 x 5 Slubbers
2—Woonsocket, 9 x 4½ Intermediates
20—Woonsocket, 8 x 4 Speeders
39—7 x 3 Speeders, Saco-Pettee, H. & B, Woonsocket, Saco-Lowell
40—6 x 3 Speeders, Saco-Pettee, Whitin

SPINNNING

27—Whitin Spinning Frames, 2¾" Gauge, 1¾" Rings, 272 Spindles, individual motor drive.
5—Saco-Lowell Tape Drive Spinning Frames 288 Spindles, 2¾" Gauge, 1⅜" Ring.

TWISTERS

15—Fales & Jenckes Tape Drive Twisters, 200 spindles each, 3" gauge, 2¼" rings.
10—Fales & Jenckes Tape Drive Twisters, 100 spindles each, 5½" gauge, 4½" rings, motor driven by 7½-HP motors, 440 volt, 3 phase, 60 cycle.
18—Fales & Jenckes Tape Drive Twisters, 132 spindles each, 5½" gauge, 4½" rings motor driven by 15-HP motors, 440 volt, 3 phase, 60 cycle.

SLASHERS

1—Saco-Lowell Slasher, 5' and 7' cylinders, 86" Headway
1—Lowell Machine Co. Slasher, 5' and 7' cylinders, 95" Headway
1—Cohoes Slasher, 5' and 7' cylinders, standard headway

WINDERS

8—Foster #12 Cone Winders, semi hi-speed 100 spindles each
20—#50 Universal Cone and Tube Winders Motor & Belt Driven
4—Foster #25 Doublers, multiple wind. Motor Driven
1—Foster #56B Doubler, 1930 model, motor driven, 40 spindles.

LOOMS

112—Draper Model "E," 42" reed space
28—Draper Model "E," 43" reed space
350—Draper Model "E," 45½" reed space
68—Draper Model "E," 45" reed space
121—Crompton & Knowles 52½" reed space 20—Harness Double Index Dobbies, non-automatic.
48—Draper Model HC Looms, 76½" reed space, Knowles Worsted heads, motor driven.
50—Stafford Looms, 100" reed space, automatic shuttle change, motor driven.

Hundreds of other looms available—Write or phone us your needs.

FINISHING

1—Winsor & Jerauld Tenter Frame, 50' long, opens to 50", side opening clips, stainless steel on brass.
1—Arlington 50" Scutcher
1—46" Granger 3 roll friction Calendar
1—44½" Butterworth 5 bowl Calendar
300—Copper dry cans, 50" face, 23" diameter, vertical frames, removable journals, siphon & bucket.
5—7 & 8 Can Back Greige Print can sets. 60" diameter cans.
1—set 36 Copper Horizontal Dry Cans. 30" diameter, 86" face.
1—set 11 Copper Dry cans, horizontal frames, 60" diameter, 91" face.

PRINTING MACHINES

1—Rice, Barton & Fales single color Printing Machine
1—Rice, Barton & Fales 3 color Printing Machine

THIS IS ONLY A PARTIAL LIST OF EQUIPMENT WHICH WE HAVE AVAILABLE

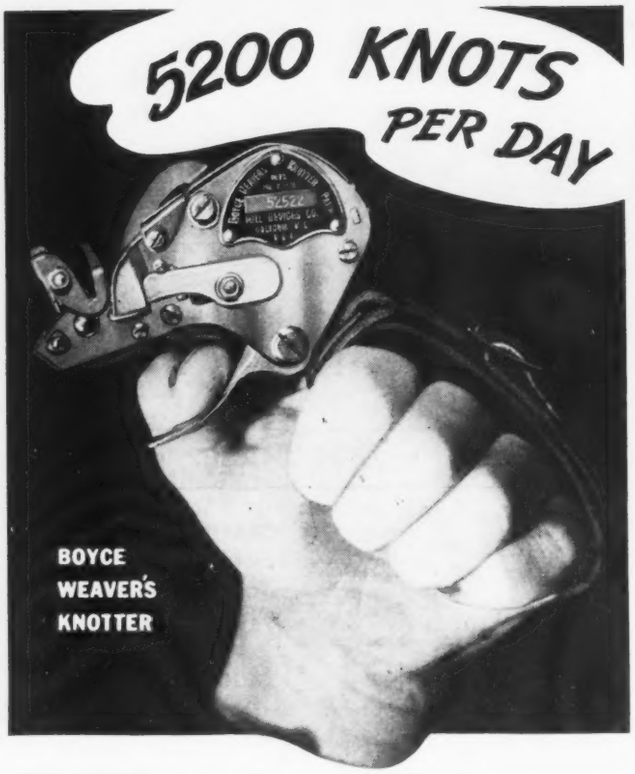
CRESCENT CORPORATION

JACOB ZISKIND, *President*

26 FRONT ST. **TEL. 7-9423** **FALL RIVER, MASS.**

EXPORT OFFICE
40 Worth St., New York, N. Y.
Telephone Cortlandt 7-1562

SOUTHERN OFFICE & WAREHOUSE
Spartanburg, S. C.
Telephone 3600



IT HAS TO BE GOOD!

A recent survey of a typical mill disclosed that some operators using a BOYCE WEAVER'S KNOTTER tied as many as 5200 knots per 8-hour day. The average for all operators was over 4000—and the *same* instruments were being used shift after shift. That's tough, cruel punishment that *only* a knotter precision-built for long life and continuous operation could take.

This dependability of performance of the BOYCE WEAVER'S KNOTTER is further assured by a complete Maintenance and Repair Department. By loaning service knotters, skilled technicians will inspect, adjust and repair every instrument in use—on a periodic schedule or on request.

MILL DEVICES COMPANY
DIVISION OF
A. B. CARTER, INC.
GASTONIA, N. C.

REPRESENTATIVES

C. E. HERRICK, 44 Franklin Street, PROVIDENCE, RHODE ISLAND
R. D. HUGHES SALES CO., 1812 South Main Street, DALLAS, TEXAS
HUGH WILLIAMS & CO., 79 Wellington St., TORONTO 1, CANADA

INDEX TO ADVERTISERS

An * indicates additional data is in the 1945/46 Textile World Yearbook and Catalog

Abbott Machine Co. 28
Aberfoyle Mfg. Co. 199
*Acme Knitting Mach. & Needle Co. 251
*Acme Steel Co. 94
Air Permeator Mfg. Co. . 198
Aldon Spinning Mills. ... 249
Allen Bradley Mfg. Co. Inside Back Cover
*Allis-Chalmers Mfg. Co. 7, 11, 15
Aluminum Co. of Am. ... 87
American Air Filter Co. .. 83
American Cyanamid & Chemical Corp. 49
American Gas Ass'n. 58
American Lumber & Treating Co. 272
*American Moistening Co. 8
*American Monorail Co. . 40
American Numbering Mach. Co. 246
American Rolling Mill Co. 41
American Viscose Corp. . 187
American Woolen Co. .. 255
American Yarn & Processing Co. 256
Ansul Chemical Co. 168
*Aridye Corp. 81
*Arkansas Co., Inc. 247
Arlington Mills 238
*Armstrong Cork Co. 19
*Arnold, Hoffman Inc. ... 25
Atlantic Rayon Corp. ... 208
*Atlas Electric Devices Co. 166
Atwood Div. Farrel-Birmingham Co., Inc. 147

Bailey, Frank 241
*Barber-Colman Co. ...66, 239
*Becco Sales Corp. 167
*Blickman, Inc. S. 232
Boger & Crawford. 142
Bolen Co., W. P. 252
*Booth Co., Benjamin. ... 200
Brinton Co. 253
Bristol Co. 62
Buffalo Forge Co. 79
Bunting Brass & Bronze 89
Burkart-Schier Chem. Co. 242
*Butterworth & Son Co., H. W. 126

Calco Chemical Co. 195
*Caldwell Co., W. E. 237
*Cameron Machine Co. ... 255
Carbomatic Corp. 229
Carrier Corp. 93
*Carter Traveler Co., Div. A. B. Carter, Inc. 270
Celanese Corp. of Am. ... 183
Century Electric Co. 55
Chicago Watchclock Corp. 212
Cleveland Tramrail Div. The Cleveland Crane & Eng'g Co. 96
Clinton Industries, Inc. .. 164
Clipper Belt Lacer Co. ... 241
Cloverleaf Mfg. Co. 254
Cochrane Corp. 237
*Cole & Co., R. D. 200
Colgate-Palmolive-Peet .. 165
Commercial Credit Co. .. 170
Commercial Factors Corp. Inside Front Cover
Commonwealth Color & Chem. Co. 236
Concordia-Gallia Corp. .. 242
Corn Products Sales Co. . 207
*Crane Co. 90
*Crane Mfg. Co. 251
*Crompton & Knowles Loom Works 23
Crouse-Hinds Co. 14
Cutler, Roger W. 185

Dana Warp Mills. 249
Darnell Corp., Ltd. 190
*Dary Ring Traveler Co. . 216
*Davis & Furber Mach. ... 243
*Dayton Rubber Mfg. Co. 31
*Diagraph-Bradley Stencil Mach. Corp. 22
Diamond Alkali Co. Standard Silicate Div. . 257
*Dinsmore Mfg. Co. 253
Dixie Mercerizing Co. ... 153
Dixie Spindle & Flyer Co. 237
Dodge Mfg. Corp. 205
*Dommerich & Co., L. F. . 36
Dow Chemical Co. 163
*Draper Corporation 1
Dresser Industries Inc. (See Roots-Connersville Blower Corp.) 188
Durant Mfg. Co. 229

*Economy Baler Co. 257
Edmos Products Corp. 219
Emmons Loom Harness Co. 38

Fafnir Bearing Co., The. . 34
*Fairbanks, Morse & Co. . 76
Falls Yarn Mills. 204
Firestone Industrial Prod. Co. 85
*Fleishel Lumber Co. 248
Flintkote Company, The. 29
Formica Insulation Co. ... 16
*Foster Machine Co. 54
Foxboro Co., The. 57
Franklin Process Co. 53
*Fuller Brush Co., The. ... 159

Gardner-Denver Co. 99
Gates Rubber Co., The. . 88
*General Electric Co. (Lamp Dept.) 64
Glidden Co., The. 26, 27
Globe Dye Works. 224
Graton & Knight Co. 130
Gulf Oil Corp.—Gulf Refining Co. 98

Heineman Corp., O. 244
Henry, Andrew K. 192
Hercules Powder Co. ...50, 51
Heyden Chemical Corp. .. 138
*Hild Floor Mach. Co. 198
Hinde-Dauch 67
*Hooker Electrochemical Co. 213
*Howard Bros. Mfg. Co. . 24
*Hubbard Spool Co. 271
*Hunt Machine Co., R. 243
*Hunter Machine Co. 193
*Huyck & Sons, F. C. 240
Hyatt Bearings Div. General Motors 169

*Industrial Dryer Corp. 194
*Ingersoll-Rand 20
International Nickel Co. Inc. 70
Iselin Co., William. 134
*Ives Co., L. T. 255

*Jenkins Sons, M. W. 210
Johnson & Bassett Co. 12
*Johnson Machine Co., Carlyle 68
Johnson Mach. Wks., Chas. B. 184
Jones-Motrola Co. 235

(Continued on Page 272)

LET'S GET DOWN TO *Chromium* HARD FACTS!

A Walhard CASE HISTORY

THE PRODUCT

Thread guides — all types and shapes.

OUR JOB

To protect them from wear and corrosion.

THE RESULT

A great increase in the life of the guides. Full protection to material passing through them.

Send us a sample of your thread guide or other textile machine part for a test chromium plating. Write for the new illustrated WALHARD 8 page booklet . . . yours without obligation. Every manufacturer requiring hard chromium plating should have this booklet.

WALTON AND LONSBURY

78 NORTH AVENUE

ATTLEBORO

MASSACHUSETTS

Stainless Steel

for corrosion resistance

Strong and durable because they're metal . . . corrosion resistant because they're stainless steel, these Hubbard spools or bobbins hold maintenance and replacement costs to a minimum.

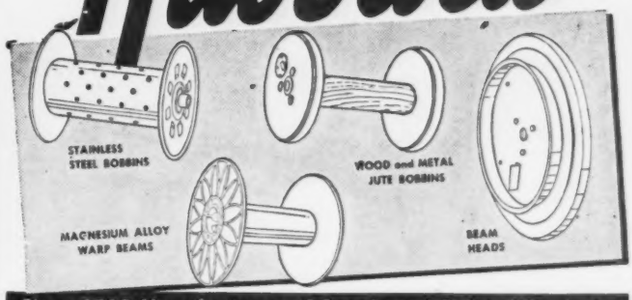
Electro-welded construction assures maximum strength for true-running long life. Non-absorption of dyes and easy cleaning are important advantages resulting from stainless steel.

Information of Hubbard stainless steel spools or bobbins and related products available upon request.

Hubbard Spool Company

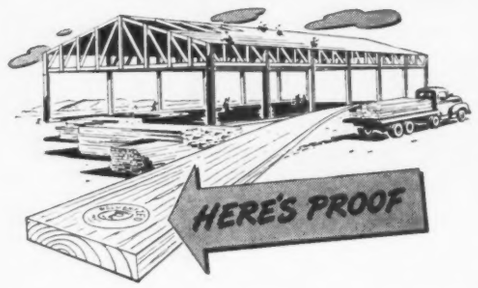
1626 Carroll Avenue, Chicago 12, Illinois

Hubbard



Since 1912 Manufacturers of Spools and Related Products

Delivering *Protection* to the Job



IT'S WOLMANIZED LUMBER*

This roof deck is going to last longer . . . they're using Wolmanized Lumber, the lumber impregnated with Wolman Salts* preservative—highly resistant to decay and termite attack.

It is recommended for use in structures exposed to:

(1) Moisture in artificially humidified buildings
(2) Steam and vapor from industrial processes
(3) Condensed water vapor in walls, floors and ceilings of refrigerated buildings
(4) Soil moisture and rain water held in joints, etc., of outdoor structures
(5) Moisture condensed by concrete or masonry

When you buy Wolmanized Lumber, you get *pressure-treated* lumber—the only reliable kind.

*Registered trademarks

1672 McCORMICK BUILDING, CHICAGO 4, ILLINOIS

(Continued from Page 270)

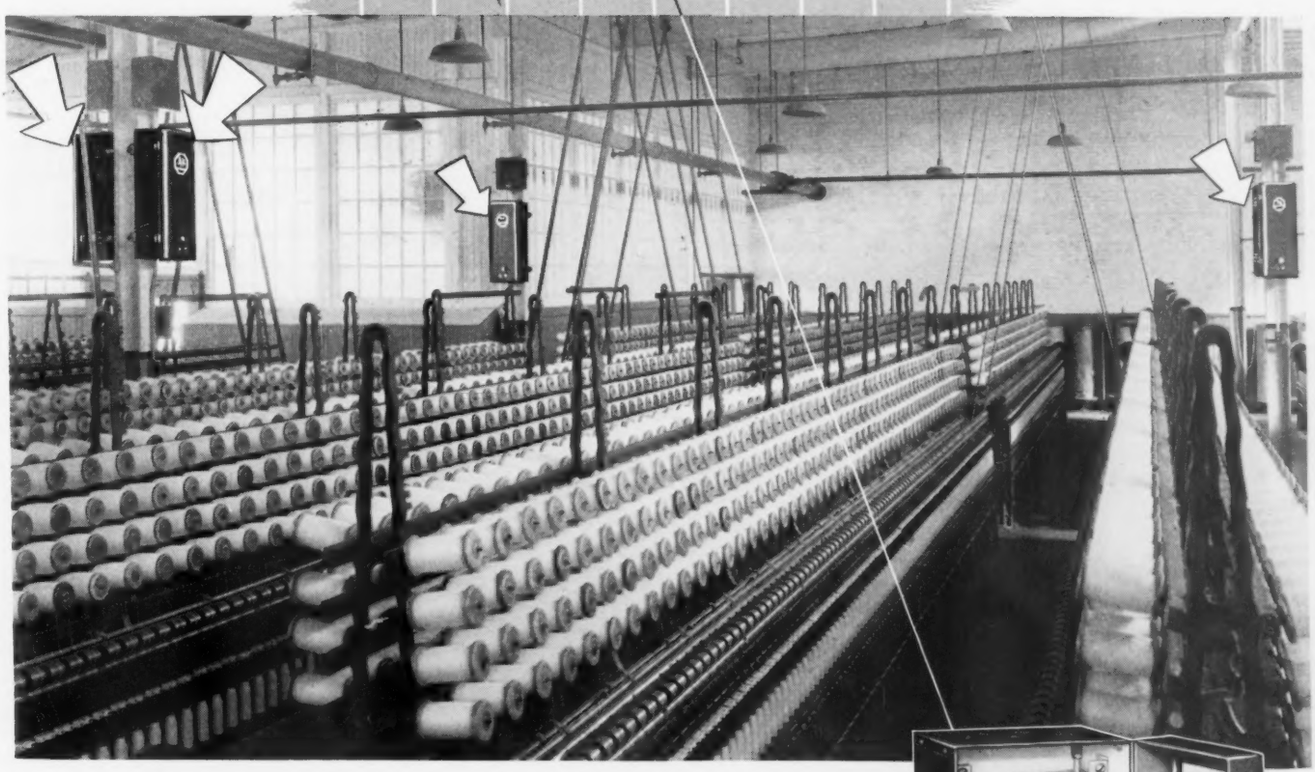
Kastrinsky Mach. Co., Inc. 253
Kearny Mfg. Co. 244
Kelley Gear & Tool Co. 237
Kemp Mfg. Co., C. M. 75
*Kenyon & Son, D. R. 257
Kiwi Engineering Co. 202
Knox Corp. 77
Kohorn & Co., Ltd., Oscar 176
*Lane & Bros., Inc., W. T. 233
*Lawrence Leather Co. 43
Leatex Chemical Co. 228
Lewellen Mfg. Co. 221
Libby-Owens-Ford Glass Co. 56
Loper Co., Ralph E. 256
*Lowell Shuttle Co. 186
Lunkenheimer Corp. 171
*Maguire & Co., J. P. 82
Manhattan Rubber Div. 59
McPherson Co., The 241
Meadows Mfg. Co. 48
Meinhard, Greeff & Co. Inc. 175
Merrimac Mills Co. 238
Merrow Machine Co. 251
Mill Factors Corp. 181
Milton Mach. Co. 248
Missouri State Dept. 182
Modern Throwing Co. Div. 242
Moisture Register Co. 252
Monomac Spinning Co. 238
*Monsanto Chemical Co. 10
Montgomery Co. 252
*Mt. Hope Machy Co. 233
*Murdock & Geb Co. 243
Murray Mfg. Co., D. J. 231
*National Aniline Div. Allied Chemical & Dye Corp. 35
*Nat. Drying Machy Co. 225
National Lead Co. 80
National Oil Products Co. 39
*National Ring Trav. Co. 249
*National Starch Products 157
*New Departure Div. General Motors 9
New Hampshire State Planning & Dev. Comm. 179
N. Y. & N. J. Lub. Co. 225
Nonquit Mills 238
*Noone's Sons Co., Jos. 214
Norfolk & Western Ry. 222
*Oakite Products, Inc. 231
Oronite Chemical Co. 132
*Otis Elevator Co. 74
*Owens-Corning Fiberglas Corp. 60
Pabst Sales Co. 230
*Paramount Textile Machy. 32
Parks-Cramer Co. 234
*Perkins & Son, Inc., B. F. 215
Permutit Co. 136
Philadelphia Quartz Co. 204
*Pittsburgh Corning Corp. 95
*Pittsburgh Plate Glass Co. Columbia Chemical Div. 37
Platt Bros. & Co., Ltd. 227
P.O.M. Co. 242
Powell Co., Wm. The 78
Prince-Smith & Stells 44
*Proctor & Schwartz, Inc. 155, 189
Railway Express Agency, Air Express Div. 174
Railway Supply & Mfg. Co. & Affiliates 140
Raybestos-Manhattan, Inc. Manhattan Rubber Div. 59
Ravonier, Inc. 191
Red Rav Mfg. Co. 240
*Reiner Inc., Rob't. 201
*Reliance Electric & Eng. Co. 47
Republic Steel Corp. 45
*Rhoads & Sons, J. E. 5
Richmond Oil, Soap & Chemical Co. 202
*Riggs & Lombard, Inc. 197
Riverside & Dan River Cotton Mills, Inc. 42
*Robert & Co. Inside Front Cover
Robaczynski, Mach. Corp. 203
Robison Processing Co. 194
*Rohm & Haas Co. 100
Rome Soap & Mfg. Co. 257
*Roots-Connersville Blower Corp. 188
*Rumford Chemical Works 128
Ryerson & Son, Inc., J. T. 124
*Saco-Lowell Shops 6
Safety & Maintenance Co. 180
*Sandoz Chemical Works. 17
*Sarco Co. 233
*Scholler Bros., Inc. 241
Scott & Williams, Inc. 245
Seaboard Air Line Ry. 235
Shell Oil Co. 144
Sinclair Refining Co. 86
Sirrine & Co., J. E. 254
Socony-Vacuum Oil Co. 13
*Solvay Sales Corp. 173
*Smith Drum Co. 61
*Sonneborn Sons, Inc. L. 151
*Sonoco Products Co. 149
Southworth Mach. Co. 250
Split Ballbearing Corp. 235
Square D Co. 69
*Standard Fabricators, Inc. 209
Standard Pressed Steel. 46
*Standard Soap Co. of Camden 202
Stearns Magnetic Mfg. Co. 206
Steelcote Mfg. Co. 231
Steel Heddle Mfg. Co. 221
*Stein-Hall 217
*Sterling Ring Trav. Co. 197
Sun Oil Co. 122
*Sylvania Industrial Corp. 211
Taber Instrument Co. 250
Taylor Instrument Cos. 84
Tennessee-Eastman Corp. 73
*Terrell Machine Co. 246
Texas Co. 2
Textile Banking Co. 196
Textile Industry Research, Inc. 244
Textile Machine Wks. 91, 92
Tompkins Bros. Co. 255
*Torrington Co., The 71, 72
Towmotor Corp. 172
Union Pacific R. R. 218
U. S. Gutta Percha Paint Co. 33
*U. S. Ring Traveler Co. 220
U. S. Textile Mach. Co. 228
United Yarn Prod. Co. 249
*Universal Winding Co. 18, 160
*Van Vlaanderen Mach. Co. 63
Vaughan Motor Co. 65
*Veeder-Root Inc. Back Cover
Victor Ring Traveler Co. 52
WAK Industries 256
Waldron Corp., John. 30
Wallerstein Co., Inc. 257
Walton & Lonsbury. 271
Wayne Mfg. Co. 204
Werner Textile Consultants, Inc. 242
*Whitin Machine Works. 21
*Whitinsville Spinning Ring Co. 249
Whitman Co., Inc., Wm. 238
Wildman Mfg. Co. 223
Wilkens-Anderson Co. 192
*Wolf & Co., Jacques 97
Wolstenholme Co., Thos. 249
*Zephyr Laundry Machy Co. 243

Searchlight Pages 258-269

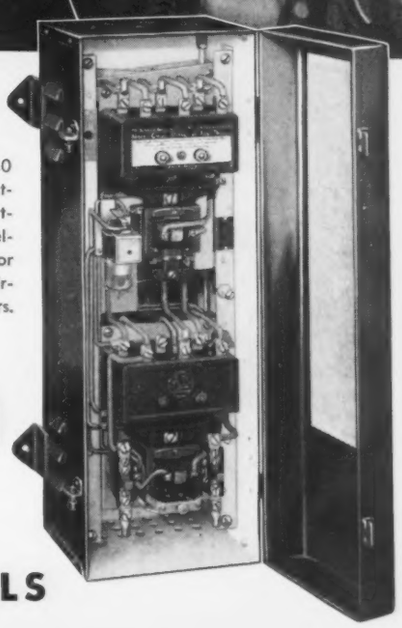
PREVENT THREAD BREAKAGE

SNAP

WITH VELVET-SMOOTH MOTOR STARTING



Yarn breakage during motor starting can be practically eliminated with Allen-Bradley resistance starters. Motors driving textile machinery are brought from standstill to full speed so smoothly and so gradually that no sudden strain is put upon the delicate threads. Furthermore, the smooth starting obtained with Allen-Bradley resistance starters reduces machine wear and tear. Send for bulletin about motor controls for textile mills. Write Allen-Bradley Co., 120 W. Greenfield Ave., Milwaukee 4, Wis.

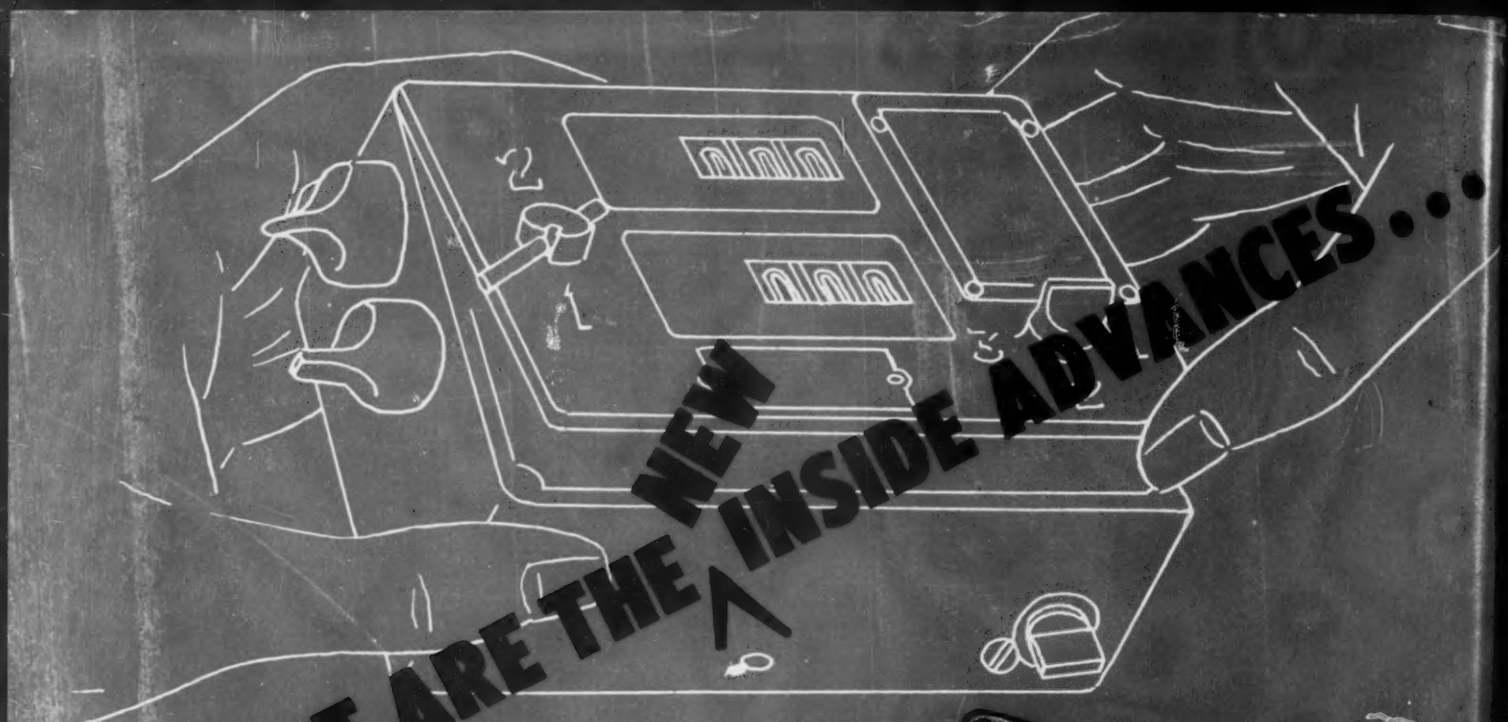


Bulletin 740 automatic resistance type starters provide velvet-smooth motor starting for squirrel-cage motors.

ALLEN-BRADLEY

QUALITY

MOTOR CONTROLS FOR TEXTILE MILLS



WHAT ARE THE NEW INSIDE ADVANCES . . .

. . . in VEEDER-ROOT 2-3 COUNTERS . . . that give you better "COUNTROL"

One of the most important advances is the adoption of plastics in the production of the *new resetting figure wheels,* which are designed to resist over-throwing in all Veeder-Root Pick, Hank, and Lineal Measuring Counters of the 2-3 type. To this use, plastics bring these new advantages:

1. Greater wear-resistance.
2. Clearer readability of figures. For plastics are naturally brighter white and sharper black . . . easy to clean.
3. Easier to mold in the intricate inner design of this wheel —which is really a wheel within a wheel.

You get these new advantages with every order for Veeder-Root Pick, Hank, Yardage and Knitting Machine Counters of the 2-3 type . . . plus the *engineered protection* against over-throwing. Get in touch with your nearest Veeder-Root office . . . have a Veeder-Root engineer show you this latest "first" in Veeder-Root *Count*rol.

VEEDER-ROOT

HARTFORD 2, CONN. **GREENVILLE,**

OFFICES IN: Boston, Chicago, Cincinnati, Cleveland, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, St. Louis, San Francisco, Montreal, Buenos Aires, Montevideo, Mexico

In Canada: Veeder-Root of Canada, Ltd., Mon

In England: Veeder-Root Ltd., (New address on